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Abstract Topic: Others

Abstract ID: ORAL-118

Abstract Title: Real World Clinical Experience of SGLT2 Inhibitors on Blood Pressure in Type 2 Diabetes Mellitus Patients: A Single Center Prospective Study

PresentingAuthor: Vishwa Unadkat

Company Name: Yashvee Diabetes Care

Background: As per IDF atlas, India is home to >70 million diabetic patients and >200 million hypertensive patients (according to Indian Heart Journal), out of which substantial percentage of patients have both. In respect to our efforts to reduce ASCVD events and load of these patients on our healthcare system, various group of drugs are being used for primary as well as secondary prevention. One such group is SGLT2 inhibitors, which has, in recent times, shown promising results in trials and early real world evidences for not only ASCVD progression and events but also nephropathy progression.

Aims & Objectives: On almost all metabolic and hemodynamic aspects, SGLT2 inhibitors have shown positive impact when given to T2DM patients, we evaluated their effect on blood pressure of T2DM OPD patients in real world setting.

Patients / Materials & Methods: This was a prospective longitudinal observational study of consecutive T2DM patients, put on SGLT2 inhibitors (Empa-, Dapa-, Cana-) regardless of their base line hypertensive status, from June 2020 to September 2020, at speciality centre by single consultant. The standard diabetes follow up care along with blood pressure record were analysed at the end of 1st, 3rd and 6th month.

Results: Total of 168 patients were initiated on SGLT2 inhibitors, data of 141, 117 and 91 patients were available for analysis at the end of 1st, 3rd and 6th month. 55% (n= 92), 30% (n= 50) and 15% (n=26) patients were pre-hypertensive, hypertensive and normotensive at the time of initiation of SGLT 2i. Average SBP and DBP reduction in all three groups at the end of 6th month are 7.3/4. 1, 9.9/6.2 and 4.9/3.2 mmHg respectively. Almost all pre hypertensive (91 out of 92) did not need to add antihypertensive and 76% (33 out of 43) hypertensive patients needed to reduce dose of the same over 6 months.

Discussion & Conclusion: SGLT2i have shown to have favourable effect as far as blood pressure in T2DM patients is concerned.

Abstract Topic: Hypertension in Young

Abstract ID: ORAL-120

Abstract Title: An Observational Study of Association of Uric Acid,Lipid Profile and BMI in Young Hypertensives[<45 Years]

Presenting Author: C. Yadavendra Reddy, Sangeetha Chowdary, Sangeetha Uppala

Company Name: ESIC MCH Sanathnagar, Hyderabad, AP, India

Background: Hypertension is the leading cause of death worldwide. The increasing prevalence of hypertension in young is an indicator of explosion of cardiovascular,renal and cerebrovascular disorders in the future. Hypertension among young people is common, affecting 1 in 8 adults aged between 20 and 40 years. This number is likely to increase with lifestyle behaviors and lowering of hypertension diagnostic thresholds. Early-life factors influence blood pressure (BP) although the mechanisms are unclear; Blood pressure tracks strongly within individuals from adolescence through to later life. Higher Blood pressure at a young age is associated with abnormalities on heart and brain imaging and increases the likelihood of cardiovascular events by middle age. However, diagnosis rates are lower, and treatment is often delayed in young patients.

Aims & Objectives: The present study was conducted to study the association of uric acid,BMI and dyslipidaemia in young hypertensives.

Patients / Materials & Methods: The present study was conducted in a tertiary care hospital for a duration of 3 months. Patients were selected based on inclusion and exclusion criteria. All patients were done routine investigations,and uric acid and lipid profile was sent to evaluate the association. Patients height and weight were recorded to calculate BMI. Patients below 12 years, pregnant women and patients with previous cardiovascular,and secondary causes of hypertension were excluded from the study

Inlusion criteria: 1. all patients with hypertension aged <45 years 2. all newly detected hypertensives.

Exclusion criteria: 1. all young hypertensives with comorbidities like cad,ckd,blood disorders etc.2. children aged <12 years.3. all pregnant women.4. all young hypertensives with previous diagnosed cause of secondary hypertension.

Results: In our study female incidence was more compared to males in the ratio 1:1. 1. patients in age group 40-45 were affected more than other agegroup. In our study we observed that BMI was a significant factor in young hypertensives. it was observed that in overweight people dyslipidaemia was significant leading to the increase in bloodpressure. uric acid was found to increase in some subjects but could not comeout as significant risk factor in young hypertensives.

Discussion & Conclusion: It can be concluded from the study that BMI with Dyslipidaemia was significant contributor to hypertension. The present study shows that both systolic and diastolic blood pressure values are linearly correlated with BMI; in particular, overweight and obesity status were significant risk factors for hypertension. While age and gender usually affect the prevalence of hypertension, BMI remained the main determinant when the analyses were stratified by gender and adjusted for age. uricacid showed increasing trend in some

patients but significant association could not be established. Furthur it can be studied that youngsters should maintain healthy lifestyle and disciplined diet to prevent the hazards of hypertension.

Abstract Topic: Comorbidities

Abstract ID: ORAL-123

Abstract Title: Hypertension Accompanied by Diabetes as A Risk Factor for Stroke

Presenting Author: Khasan Ibragimov, Komila Abdushukurova, Ibrat Axmedov, Nasiba Hamraueva, Nasiba Ishankulova, Farangiz Olimjonova, Laylo Tashinova, IlhomSultonov, Farrux Xasanov, Shuxrat Ziyadullayev

Company Name: Samarkand State Medical Institute, Uzbekistan

Background: Stroke is becoming a serious healthcare problem in Uzbekistan, increasing necessity studies to explore the risk factors. People with obesity, hypertension and diabetes are known to worsen the the problem and reduce chances of favorable outcomes for a patient. This review article assesses what can be done to eliminate or reduce the risk of stroke.

Aims & Objectives: We aimed to evaluate the hypertension and diabetes mellitus as a risk factors associated with stroke and to identify the major problems that have led to increased risks of stroke.

Patients/Materials & Methods: We performed a literature review of studies (clinical trials, meta-analysis, case control) through search of EMBASE and MEDLINE between March and June 2020.

Results: A recent study showed that the risk of stroke increases by 18% with an increase in systolic blood pressure of 10 mmHg. While for patients with essential hypertension and impaired glucose metabolism, the risk of stroke and death increased 1. 68 times per 1 standard increase in systolic blood pressure. Similarly, other studies have shown that the risk of ischemic and hemorrhagic stroke increased 1.29 and 1. 56 times, respectively, by a 10 mmHg increase in systolic blood pressure. in persons with diabetes mellitus. Similar results were found in studies by Framingham, NDR-BP II, and IDACO, which showed that the risk of stroke increased approximately 2–3 times in patients with high systolic and diastolic blood pressure. Meanwhile, the risk of stroke was approximately 1. 5–2. 5 times higher in diabetic patients with arterial hypertension compared with diabetic patients without hypertension.

The results of this review are that stroke prevention begins with the identification of risk factors for stroke, most patients diagnosed with stroke have different risk factors. Therefore, it is very important to identify all risk factors for stroke and also teach the patient how to control them.

Discussion & Conclusion: After summarizing all the studies mentioned in the article, it can be established that hypertension and diabetes mellitus are risk factors for stroke and, if possible, should be controlled and prevented in order to reduce the incidence of stroke and the associated health burden.

Abstract Topic: Comorbidities

Abstract ID: ORAL-132

Abstract Title: Is Hypertension a Predictor of Mortality in Hemodialysis Patients?

Presenting Author: Mega Febrianora, Mohammad Rizki Akbar, Mohammad Iqbal

Company Name: Hasan Sadikin General Hospital, Indonesia

Background: The predictors of mortality in hemodialysis patients remain unknown.

Aims & Objectives: To test the hypothesis that hypertension is a predictor of mortality in hemodialysis patients.

Patients/Materials & Methods: A number of 444 hemodialysis patients in 2018 at Hasan Sadikin General Hospital participated in the study. We performed history taking to determine comorbid (history and duration of hypertension, history of diabetes, coronary artery disease, congestive heart failure, stroke, vascular disease, liver disease, and alcohol consumption) and electrocardiography as baseline data. The patients then were followed up to assess the death event. Cox proportional hazards models were used to estimate hazard ratios (HR) and their 95% CI for various covariates.

Results: Among 444 hemodialysis patients, 266 patients matched the inclusion and exclusion criteria, 166 patients were completely followed up in December 2019. The mean age was 50.8±14.68 years, 52.4% female, mean duration of follow-up duration was 11.2±10.08 months. History of hypertension was found in 149 (89.8%) patients. We observed all-cause death in 109 patients (65.7%) patients. Hypertension was not associated to death (HR 0.652; 95% CI, 0.336–1.266, p = 0.207). The other comorbid were also not related to death. We found out that atrial fibrillation was associated as a predictor of death (HR 2.540; 95% CI, 1. 558–4. 140, p = <0.001).

Discussion & Conclusion: Hypertension was not a predictor of mortality in hemodialysis patients. However, we found out atrial fibrillation event was associated with a higher incidence of death in hemodialysis patients.

Abstract Topic: Hypertension in Elderly Patients

Abstract ID: ORAL-137

Abstract Title: Clinical Study of Therapeutic Adherence & Assessment of Quality of Life in Elderly Patients of Hypertension in a Tertiary Care Hospital.

Presenting Author: Indrashish Mukherjee, NarsinghVerma

Company Name: King George's Medical University, Lucknow, UP, India

Background: Hypertension is a chronic disorder which is emerging as major health problems with increasing morbidity and mortality. The prevalence of hypertension is double among diabetics as compared to non diabetic. Non adherence to treatment has been a major hurdle in

the managementof hypertension and it could occur at different stages of the treatment.

Aims & Objectives: To assess the level of adherence of elderly hypertensive patients taking the antihypertensive medications.To assess the compliance level of the hypertensive patients visiting the OPD.

Patients/Materials & Methods: 84 patients are included in the study. The study is a cross-sectional, observational study. The present work will be conducted in the Department of Internal Medicine of King George's Medical University (KGMU), Lucknow, India

Results: It can be seen that 47.61% patients have high adherence, 44.04% have medium and only 8.33% has low adherence level. It has also been found that adherence to anti-hypertensive medication has been found more in adherence than in any other medication.

Discussion & Conclusion: Males are much more adherent as compared to females

Abstract Topic: Others

Abstract ID: ORAL-150

Abstract Title: Effect of Combined Exercise Protocol along with Regular Brisk Walking on Blood Pressure in Patients with Type 2 Diabetes: A Randomized Controlled Trial

Presenting Author: Shubhankar Mahapure, Amrit Kaur

Affiliations: MVP Samaj's College of Physiotherapy, Nashik, MS, India

Background: Hypertension in patients suffering from type 2 diabetes markedly increases risk for cardiovascular diseases.

Aims & Objectives: To check the effect of structured exercise program on blood pressure in patients suffering from type 2 diabetes.

Patients/Materials & Methods: A prospective, randomized controlled trial was conducted for 3 months in 72 patients of aged 40 to 65 years, with hypertension and type 2 diabetes not requiring insulin. Exclusion criteria included fasting blood glucose >400 mg/dL, HbA1c >11 %, history of myocardial infarction, prior coronary artery bypass grafting or coronary angioplasty, chronic heart failure, co-morbid conditions that would limit the ability to exercise, high degree heart block, diabetes requiring insulin, and regular participation in moderate to vigorous exercise for >90 minutes per week.

Combined exercise protocol, along with brisk walking, 4 times per week for 3 months was given to the experimental group.

General advices regarding diet and physical activity were given to the control group. Resting SBP and DBP (primary outcome); fasting glucose Glycosylated haemoglobin, BMI and waist hip ratio was secondary outcome.

Results: Baseline comparisons were made using independent t-tests. There were no significant statistical differences for any outcome variables between the exercise groups and control group.

Post training systolic BP and diastolic BP were lower in the exercise group than in the control group as $p < 0.05$. Even significant effect is seen on HbA1C, BMI and waist hip ratio of exercise group ($p< 0.05$).

Discussion & Conclusion: Long-term regular physical activity training was found to be helpful in improving blood pressure, glycaemic control, and body composition among patients with T2DM.

Abstract Topic: Hypertension in Young

Abstract ID: ORAL-155

Abstract Title: Disparities in Hypertension Management in Young Indonesian Adults: A Secondary Data Analysis of Indonesian Life Family Survey Wave 5

Presenting Author: Bagas Suryo Bintoro

Company Name: Faculty of Medicine, Public Health and Nursing Universitas Gadjah Mada

Authors And Affiliations: Department of Health Behavior, Environment, and Social Medicine, Faculty of Medicine, Public Health and Nursing,Universitas Gadjah Mada,Sleman,Indonesia

Background: Hypertension (HT), the risk factor for cardiovascular disease, is often poorly recognized, treated, and managed in young adults.

Aims & Objectives: This study aims to present the disparities in HT management in young Indonesian adults.

Patients / Materials & Methods: This study used the Indonesian Life Family Survey wave 5 among young adults 20-45 years old (n=21,729). The demographic characteristic (age, sex, marital status, residence, and self-reported wealth) and HT status were analyzed descriptively. Among those with HT, we analyze the treatment proportion and the HT-related education given by the health worker (weight control, diet, exercise, and smoking). All of the variables were self-reported. Multivariable logistic regression was used to calculate the association between demographic characteristics and the outcomes.

Results: Among respondents, 48,7% were female, 80.9% were married, and 61.2% lived in urban areas. The HT prevalence was 7.8%. Only about 15.3% of the HT patients reported currently taking medication for the HT. For the HT-related education, only 32.7% of the HT patients reported having their education session with their health worker about weight control, while the proportion of other risk factors were 43.8% for exercise, 64.7% for diet, and 17.7% for smoking. Female and older age were associated with the higher odds of HT treatment. While female had a higher odds of receiving HT-related education on weight control from the health worker, male had a higher odds of receivingthe education on smoking and exercise.

Discussion & Conclusion: The management of HT requires a comprehensive approach, including treatment and education, and both were still reportedly low in Indonesia. Stakeholders should put more effort into the patient management of HT for the health of the patient and the nation.

Abstract Topic: Complications

Abstract ID: ORAL-156

Abstract Title: Quarterly versus Annual ECG Screening for Atrial Fibrillation in Older Chinese Individuals (AF-CATCH)A Prospective, Randomised Controlled Trial

Presenting Author: Wei Zhang, Yi Chen, Jiguang Wang

Company Name: The Institute of Hypertension

Authors and Affiliations: The Shanghai Institute of Hypertension, Shanghai, China

Background: Screening for atrial fibrillation before symptoms manifested and subsequent initiation of oral anticoagulants (OACs), could prevent stroke and death. The most cost-effective strategy to screen atrial fibrillation in high-risk population aged 65 and over remains unknown.

Aims & Objectives: We aimed to investigate whether more frequent electrocardiography (ECG) recordings would significantly improve the detection of atrial fibrillation compared with annual ECG screenings.

Patients / Materials & Methods: We did a randomised controlled trial that compared different screening frequencies of 30 s single-lead ECG (AliveCor Heart Monitor) in the detection of atrial fibrillation in Chinese residents (≥65 years) in five community health centres in Shanghai, China. Only participants without history of atrial fibrillation and without atrial fibrillation rhythm at baseline were eligible for inclusion in the trial. Random assignment was done with the use of a random number table and stratified for study site. Participants were randomly assigned in a 1:1 ratio to annual or quarterly screening groups. The quarterly screening group was further randomly assigned in a 3:1 ratio to subgroups of quarterly screening and quarterly screening plus (which involved ECG screening once per week for the first month of follow-up, then quarterly for the remainder of follow-up). The primary outcome was the detection rate of atrial fibrillation.

Results: Between April 17, 2017, and June 26, 2018, 8240 participants were randomly assigned to annual screening (n=4120), quarterly screening (n=3090), and quarterly screening plus (n=1030), with a mean number of ECG recordings of 1·6 (SD 0·5) for annual screening, 3·5 (1·5) for quarterly screening, and 5·2 (2·9) for quarterly screening plus during a median of 2·1 years follow-up (13 284 person-years).73 incident cases of atrial fibrillation occurred: 26 in the annual screening group (4·1 per 1000 person-years) and 47 in the quarterly screening group (6·7 per 1000 person-years. Quarterly screening was associated with a significant increase in the detection rate of atrial fibrillation, compared with annual screening (hazard ratio [HR] 1·71; 95% CI 1·06–2·76; p=0·029).40 incident cases were detected in quarterly screening (7·2 per 1000 person-years; HR compared to annual screening, 1·83; 95% CI 1·12–3·00; p=0·017) and seven in the quarterly screening plus group (4·8 per 1000 person-years; HR compared with annual screening, 1·24; 0·54–2·86; p=0·61). No significant difference was noted between quarterly screening and the quarterly screening plus group (HR of quarterly screening plus compared with quarterly screening, 0·68; 0·30–1·52; p=0·35).

Discussion & Conclusion: Quarterly 30 s single-lead ECG screening was associated with a significantly higher detection rate of incident atrial fibrillation compared with annual screening, but additional once per week screenings in the first month did not yield an added predictive value. Quarterly screening might be considered in a general population at a high risk of atrial fibrillation, such as those aged 65 years and older.

Abstract Topic: Hypertension in Elderly Patients

Abstract ID: ORAL-159

Abstract Title: Association of Hypertension and Sensorineural Hearing Loss Among Elderly

Presenting Author: Havilah Twinkle Reddipogu, Mohammed Jaffer Pinjar, Tata Rao Boni

Affiliations: Great Eastern Medical School and Hospital, Ragolu, Srikakulam, AP, India

Background: The hearing loss (HL) is a factor that irrespective of the degree of commitment affects the quality of life.Studies confirm that hearing loss starts at about 60 years, and increases progressively along the years. High pressure in the vascular system causes inner ear haemorrhage, causingprogressive or sudden hearing loss.

Aims & Objectives: To assess the Association of hypertension and hearing loss in elderly individuals.

Patients / Materials & Methods: It is a Cross sectional study done in ENT and medicineDepartments, of GEMS,Srikakulam,Andhra Pradesh using Consecutive sampling. Sample sizeof 150 is calculated using the formula4pq/l2based onprevious studies.

Institutional Ethical committeeapprovaland written consent is taken. Hypertension is verifiedusing mercury syphgmomanometer. After sufficient rest an average of two readingsare taken within a gap of 10 mins.Hearing is assessed through threshold audiometric and audiologic assessment

Data is fed into an excel worksheet and analyzed using epi info 7 software.using frequency distributions with proportions, and chi square test with $p < 0.05$ is considered as significant,using95% confidence intervals

Results: In the present study, inpatients without hypertension20 % had mild hearing loss and 69%moderate hearing loss.Ingrade 1 hypertension7.9 % of patients had mild hearing loss, 73% moderate hearing loss,11% sever hearing loss and 7.9% profound hearing loss. Ingrade 2 hypertension 11% had moderate hearing loss,33.3%severe and 55. 5% profound hearing loss.

The p value calculated by Chi square method is less than 0.05and Odds ratio more than 1, showing a significant association between hypertension and increase in hearingloss.

Discussion & Conclusion: Study suggests that hypertension is an accelerating factor of degeneration of the hearing apparatus due to agingand we highlight the importance of preventive processes that may mitigate the hearing loss caused by high blood pressure.

This study got approval as a project of PG diploma in Geriatric medicinecourse I persued from CMC Vellore

Abstract Topic: Complementary Medicine

Abstract ID: ORAL-163

Abstract Title: Impact of Yoga on Inflammatory Cytokine Markers in Type 2 Diabetes Mellitus (T2DM).

Presenting Author: Vishakha Chand, Manish Gupta

Authors And Affiliations: University College of Medical Sciences, Delhi,Delhi,India

Background: Today, Diabetes Mellitus (DM) is an epidemic which is engulfing whole world at a very fast pace. The main pathogenesis of DM lies in chronic low grade inflammation. With prevailing unhealthy lifestyles, yoga is seen as both complementary and integrative approach in delaying progression of such chronic diseases.

Aims & Objectives: Aim: To study the effect of yoga on inflammatory cytokines in T2DM patients.

Objectives: To assess the effect of yoga on cytokines in T2DM patients in comparison to conventional therapy alone. To compare cytokine levels in T2DM patients before and after y

Patients / Materials & Methods: The study involved 60 diagnosed Type 2 diabetic patients (age 30–60 years of 0-10 years duration) receiving conventional drug therapy along with diet modifications which were stratified equally into two groups: yoga (n=30) and control (n=30) group. Yoga group patients performed a defined yogic series consisting of 7 asanas and 3 pranayamas for 40 - 45 minutes daily for 8 weeks under the guidance of a yoga expert, while controls continued with only conventional therapy. Basal recordings of TNF-α and IL-6 were recorded initially at the time of recruitment and reassessed after 8 weeks in both the groups.

Results: There was 29% decrease in TNF-α levels and IL-6 levels reduced by 23% in yoga group, contrary to the 2. 5% and 0.7% increase in the respective levels in the control groupwith p-value<0.01.

Discussion & Conclusion: Therefore, it can be concluded that inflammatory markers increase with the progression of the DM in spite of taking convention drug therapy. Yoga may reduce the effects of stress and would be beneficial to the patients of Type 2 DM in terms of better inflammatory control.

Abstract Topic: Others

Abstract ID: ORAL-168

Abstract Title: Lessons from Video Recordings of Patient Interactions

PresentingAuthor: Balram Sharma

Affiliations: Jagadguru Kripalu Parishat, Vrindavan, UP, India

Background: How are we being percieved by our patients?Do we really know?I have always considered myself a composed nice-guy but is this reality?I have always placed proper behavior and professionalism as my guideposts to being a doctor. I needed to know if I was living up to my standards.

Aims & Objectives: Observe level of profesionalism through non-verbal communication.

Patients / Materials & Methods: I video taped myself during my OPD for 4 hours. I was blinded to the patient and I did not record sound. Only my own stance was recorded. This one done on a random OPD day.4 hours continuous using the program on my laptop "OBS STUDIO". This was also completed before the pandemic.

Results: Initially I tried to make the project scientific by counting the number of times I smiled, laughed but I realized that there is no way to quantify such interactions. But I made notes from each interaction to see subjectively how I was doing.

Discussion & Conclusion: My main conclusions are below:

- Poor posture, as the time went on I sunk in my seat!
- I perceived myself as caring but seemed more serious then I thought
- Initial part of visit I am writing when I should be making eye contact
- At end of visit I seemed tired and not optimistic.

This project drastically changed my practice. While internally we may be happy and pleasant but it must be shown to the patient. Communication has been lost due to our masks but we must work harder to communicate our care for such patients. In our country patients rarely take medication daily and without true care, concern and compassion are patients will not follow our advice.

Abstract Topic: Others

Abstract ID: ORAL-172

Abstract Title: Correlation of Hypertension with the Severity of Knee Osteoarthritis: A Cohort Study

PresentingAuthor: Ajai Singh, Narsingh Verma, Ishan Vohra

Authors And Affiliations: King George's Medical University, Lucknow, UP, India

Background: Osteoarthritis (OA) is the most common cause of impairment in the elderly. OA is a progressive degeneration of the articular cartilage in the joint. Hypertension, or high blood pressure, is one of the blood vessel illnesses that is now thought to have a detrimental effect on the joints.

Aims & Objectives: Correlation between hypertension with the clinico-radiological profile and severity of OA knee.

Patients / Materials & Methods: In this cohort study, a total of 150 cases of osteoarthritis knee patients of either sex or age > 40 years were enrolled. The entire study was conducted in the Department of Orthopedic Surgery, King George's Medical University. A full history was collected, and the afflicted joints and surrounding regions were thoroughly examined. The VAS and Lequesne Index were used to determine clinical severity. K. L grading was used to determine the

radiological severity of the disease. Blood pressure was taken in both arms using the auscultatory method, as recommended by the American Heart Association. If the average was greater than 140/90 mm Hg on either side, the person was classified as 'hypertensive. '

Results: Total 55 male and 95 female patients with the mean age of 55.8 years were found. The 98 (65.3%) patients were hypertensive, and the rest 52 (34.7%) patients were normotensive. No demographical differences were found between the groups. Hypertension was found to bestatistically significant correlation with the clinical and radiographic severity of OA knee.

Discussion & Conclusion: The considerable correlation between hypertension and osteoarthritis will bridge the knowledge gap and transform our approach to hypertension, heart disease, and osteoarthritis therapy. We may be able to identify novel risk factors for these diseases, and so it should be investigated further.

Abstract Topic: Others

Abstract ID: ORAL-176

Abstract Title: Association of QTC Interval in Patients with Uncomplicated Metabolic Syndrome

Presenting Author: Amandeep Kaur, Preeti Singh Dhoat, Madhur Verma

Affiliations: AIIMS,Bathinda, Pubjab, India

Background: Metabolic syndrome (Met S) is clinically important because of its association with increased risk of sudden cardiac death, as well as cardiovascular disease-related mortality. Data between Met S and prolonged corrected QT (QTc) intervals, a useful predictor of sudden cardiac death, are limited in apparently healthy adults.

Aims & Objectives: To Correlate the QTc in patients with uncomplicated metabolic syndrome.

Patients / Materials & Methods: We examined the association between QTc interval and uncomplicated metabolic syndrome in 150 patients visting our OPD.Participants with history of stroke, ischaemic heart disease, Thyroid, Respiratory, Renal, Hepatobiliary,Patients on glucose lowering or anti-hypertensives and Patients on drugs effecting QT interval were excluded from study. QTc was calculated using Bazett's formula.

Results: The QTc Interval positively correlated with BMI, Age, Blood Pressure, Lipid Profile, Fasting Blood sugar and 2-h postprandial blood glucose (PBG). Mean QTc increased with increase in number of metabolic syndrome components (p value<.001).

Discussion & Conclusion: Increased QTc has a detrimental effect on cardiovascularoutcomes, so prolongation of QTc is early marker for predicting the development of cardiovascular disease and a risk factor for adverse outcome in MetS

Abstract Topic: Epidemiology

Abstract ID: ORAL-181

Abstract Title: Burden of Hypertension in T2DM

PresentingAuthor: Vipul Chavda, Dhruvi Hasnani, Banshi Saboo*, Shriji Hasnani

Affiliations: Rudraksha Institute of Medical Sciences,Ahmedabad, Gujrat, India, *Diacare- Diabetes Care &amp, Hormone Clinic, Ahmedabad, Gujrat, India

Background: The dual epidemic of hypertension and hyperglycemia contribute to the worsening of the health outcomes of the population leading to reduced quality of life. The earlier onset of these conditions are leading to an earlier onset of their complications as well. There is a need to know the burden of hypertension in people with diabetes and whether the steps taken by the healthcare system are sufficient.

Aims & Objectives: To observe and analyse the existing burden of hypertension in people of diabetes.

Patients / Materials & Methods: Retrospective data collection was analysed for 4 tertiary care diabetes hospitals in the western and central India from Jan 2021 to 30th august 2021. All patients who stepped in (physically visits only) have been tested for their BP as a part of the clinical examination protocol. Their medical history for ongoing medication, anthropometric data, and the metabolic lab parameters were assessed.

Results:we were able to collect the data of 9780 people with diabetes. The blood pressure was collected as per the routine clinical protocols and documented for all these people. The median age of the population was 43.8years included 57% males. 1583 people were detected with first time hypertension. The pre-existing hypertensive patients were divided into 3 groups monotherapy, dual and triple therapy. These were further analysed to be able to reach target control of below 140/90 mm Hg or not. Despite being on triple therapy 1169 people with diabetes were still away from their target blood pressure control. The mean A1c in uncontrolled HTN was found to be 9.74% and in controlled HTN group was 9. 53%.

Discussion & Conclusion: The epidemiological data that we analysed made us introspect in to the fact that hypertension is quite prevalent in people with diabetes. There is a significant population that do not achieve target blood pressure control despite being on dual and triple anti-hypertensive molecules.

Abstract Topic: Epidemiology

Abstract ID: ORAL-182

Abstract Title: Epidemiological Mapping Study- Attempt at Early Screening – Early Intervention

Presenting Author: Bharat Saboo*, Vipul Chawda**, Dhruvi Hasnani**, Abhishek Shrivastav[1], S. s. Dariya[2], Aniket Inamdar[3], Rupam Choudhary[4], Ajoy Tiwari[5], Jayaprakashsai Jana[6]

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Background: Hypertension is the most important chronic condition leading to cardiovascular complications in India. Lack of awareness and epidemiological data is the reason for inertia for primordial, primary and secondary prevention. Education, region epidemiological mapping and early screening and intervention can help benefit the population in terms of cardiovascular morbidity and mortality.

Aims & Objectives:to gather, analyze and intervene a large population for early screening, primary and secondary prevention for hypertension.

Patients / Materials & Methods: A team of doctors, nurse, educator and MSW gathered together to understand the prevalence and the incidence of diabetes and Hypertension at rural and sub-urban areas under 9 consultants at different geographical areas of India. Collection of anthropometric data and medical history along with education of the population was done. Further analysis and follow up with Lab parameters was advised to those with newly detected hypertension. They consulted those with preexisting and uncontrolled hypertension and the therapy was up titrated at the consultant's discretion. Screened population was from 30 to 88 years of age

Results: No. of sites: 9

Population screened: 346

Male-189; Female:157.

Median Age: 46

Newly detected Hypertensive:66

Pre-existing Hypertensive:142

Undetected HTN is more common in females, Rural area and those with T2DM.

Discussion & Conclusion: Hypertension is Far More prevalent than what it seems in Indian Population, the need is to emphasize screening amongst those found at more risk of having undetected hypertension, Also healthcare workers should focus more emphasis on educating those with undetected HTN so that they can get themselves screened early and get treated. As this subset of patient often go undetected and suffer long-term consequences

Abstract Topic: Epidemiology

Abstract ID: ORAL-184

Abstract Title: Influences of the Achieved Systolic Blood Pressure on Age- and Sex-Related Left Ventricular Structural Alteration in Community Hypertensive Population: An Echocardiographic Longitudinal Study

Presenting Author: Anping Cai, Lin Liu, Dan Zhou, Yingqing Feng

Affiliations: Guangdong Provincial People's Hospital, Guangzhou, China

Background: Blood pressure (BP) lowering is an important approach to prevent left ventricular hypertrophy (LVH) development. The SPRINT trial suggests that a lower achieved systolic BP (SBP) was associated with a lower incidence of LVH. While in the community populations, whether age- and sex-related LV structural alteration varied by achieved SBP was unknown.

Aims & Objectives: The current study was to evaluate age- and sex-related left ventricular (LV) structural alteration and to explore whether achieved SBP level (< 120, < 130 and < 140 mm Hg) at follow-up could modify relationship between age and sex with LVH development.

Patients / Materials & Methods: A total of 1419 community hypertensive patients (mean age 61 years, women 50. 5%) without LVH at baseline were included. LV structural indices were measured using transthoracic echocardiography at baseline and follow-up. Age and sex-related LV structural alteration was evaluated using regression analysis.

Results: Per 10-years increase in age was associated with positive alteration of LV mass (LVM) index (coefficient-β: 2. 67) and LV mass-to-volume (LVMV) ratio (coefficient-β: 0.04). Female sex was associated with positive alteration of LVM index (coefficient-β: 4.80) and LVMV ratio (coefficient-β: 0.05). After a median follow-up of 4 years, women had a higher incidence of LVH compared to men (36.8% vs 11. 5%, P < 0.001), and this sex-difference was increased with age. The association between age and LVH development was nonsignificant when achieved SBP < 120 mm Hg. The association between female sex and LVM index alteration was nonsignificant when achieved SBP < 120 and < 130 mm Hg.

Discussion & Conclusion: Both age and female sex were associated with a phenotype of LV remodeling featured by increased LVM index and concentric remodeling. Women had a higher risk of developing LVH. A lower achieved SBP at follow-up conferred greater effects on mitigating age-related LVH development and sex-related LVM index alteration.

Abstract Topic: Basic Research

Abstract ID: ORAL-186

Abstract Title: Angiotensin II Reduces the Expression of CX43 and Inhibits the C-SRC /MAPK/ERK Pathway in Cardiomyocytes

Presenting Author: Xin Fan, Xinrong Chen, Xu Zhao, Wenjuan Wang, Runmin Sun, Chengkun Kou, Jing Yu

Affiliations: Lanzhou University Second Hospital, Lanzhou, China

Background: Hypertension is associated with abnormal renin angiotensin system (RAS). Angiotensin II (AngII), an important substance in RAS, is closely related to cardiomyocyte injury. Connexin43 (Cx43), a key structural protein in cardiomyocyte membrane, takes part in signal transduction and substance transport. Cx43 may cause extracellular interstitial fibrosis. It is known that Cx43 increases collagen I in heart tissue by regulating nuclear factor kappa B and Mechanistic metalloproteinase. However, the relationship between Ang II and Cx43 has been controversial,and how Ang II affects Cx43-related pathway is unclear.

Aims & Objectives: The purpose of this study is to explore whether Ang II can affect the expression of Cx43 and inhibit c-Src /MAPK/ERK pathway.

Patients / Materials & Methods: Give rat cardiomyocytes (H9C2 cells) different concentrations of Ang II (10-5M,10-6M and 10-7M, for 48h), and establish Ang II groups. Otherwise, there is a contral group, which was given normal culture without Ang II. Proteins of Cx43 and c-SRC /MAPK/ERK pathway from all groups were detected by Western Blot, and mRNA of these proteins were detected by PCR. SPSS was used for statistical analysis.

Results: Compared with the control group, protein of Cx43, c-SRC, ERK2 and ERK1 were significantly decreased in Ang II group, and when the concentration of Ang II was 10-6M, these proteins were the least. mRNA of Cx43, ERK2 and ERK1 also were cut down after giving Ang II (only 10-6M).

Discussion & Conclusion: Both results of proteins and genes indicated that Angiotensin II can reduce the expression of Cx43 and inhibit c-SRC /MAPK/ERK pathway, and Angiotensin II may influnce the function of cardiomyocytes via connexin43 and c-Src / MAPK/ERK pathway.

Abstract Topic: Hypertension in Women

Abstract ID: ORAL-189

Abstract Title: Effect of Free Androgen Index on Blood Pressure Variability and Target Organ Damage in Postmenopausal Hypertensive Women: Finding from A Cross-Sectional Study

PresentingAuthor: Jianshu Chen and Jing Yu

Affiliations: Lanzhou university second hospital, Lanzhou, China

Background: Left ventricular hypertrophy (LVH) is one of the important signs of early target organ damage in patients with hypertension. The prevalence of hypertension and related target organ damage in postmenopausal women increase significantly, which is believed to be related to the change in the sex hormone axis in women after menopause. Clinical evidence suggests that androgen plays a key role in the risk of cardiovascular disease in both men and women. However, most current studies have focused on the relationship between serum total testosterone (TT) and blood pressure (BP) regulation in male patients. Studies on the role of bioavailable testosterone (BioT) in postmenopausal hypertensive women with LVH have rarely been reported.

Aims & Objectives: The present study was to investigate the effects of free androgen index (FAI) on ambulatory blood pressure (ABP) and target organ function in postmenopausal hypertensive women.

Patients / Materials & Methods: 285 postmenopausal hypertensive women (mean age 54.06±3. 61) were admitted to the Department of Hypertension of Lanzhou University Second Hospital between December 2018 and December 2020. According to the serum FAI level, the participants were divided into a low-FAI (≤0. 15) group, a medium-FAI (0. 15-0.2) group and a high-FAI (≥0.2) group. The relationship of FAI with 24-h ABP, left ventricular mass index (LVMI) and cardio-ankle vascular index (CAVI) was analyzed.

Results: The LVMI, CAVI, 24-h mean systolic blood pressure (SBP), 24-h SBP coefficient of variation and 24-h SBP standard deviation, 24-h SBP average real variation (ARV) and 24-h diastolic blood pressure (DBP) ARV in high-FAI group were significantly higher than those in low- and medium-FAI groups ($P<0.05$). After adjusting for confounding factors, partial correlation analysis showed that FAI was positively correlated with LVMI ($r=0.728$, $P<0.001$), CAVI (left: $r=0.718$, $P<0.001$; right: $r=0.742$, $P<0.001$), 24-h SBP ARV ($r=0.817$, $P<0.001$) and 24-h DBP ARV ($r=0.747$, $P<0.001$). After adjusting for confounding factors, it was found that LVMI increased by 17. 64g/m2 for every 1 unit increase in FAI. CAVI also increased by 8.983 for every additional unit of FAI. In addition, the results also showed that LVMI and CAVI respectively decreased by 0. 198g/m2 and 0.009 for every 1 unit increase in SHBG. Multivariable linear regression showed that FAI was an independent risk factor for 24-h SBP ARV (OR:20.416, 95%CI 8. 143 to 32. 688, P=0.001) and 24-h DBP ARV (OR: 16. 539, 95%CI 0.472 to 32. 607, P=0.044). The results also showed that SHBG was an independent factor of 24-h SBP ARV (OR: -0.022, 95%CI -0.044 to 0.000, P=0.048) and 24-h DBP-ARV (OR: -0.018, 95%CI -0.029 to -0.008, P=0.001).

Discussion & Conclusion: Serum FAI level was positively correlated with 24-h SBP ARV and 24-h DBP ARV in postmenopausal hypertensive women, which was not affected by other confounding factors. The high level of FAI in postmenopausal hypertensive women was associated with abnormal BPV and severe target organ damage.

Abstract Topic: Hypertension in Women

Abstract ID: ORAL-190

Abstract Title: Effect of Sakobactril-Valsartan on Early Renal Function and Vascular Function in Patients During Perimenopause with Hypertension

Presenting Author: Pei Ying, Jian-shu Chen, Hao-dong Zhang, Qiong-ying Wang, Yu Jing

Authors And Affiliations: Lanzhou University Second Hospital, Lanzhou, China

Background: Antihypertensive therapy was performed with sacubitril-valsartan (ARNI).

Aims & Objectives: To evaluate the effects of ARNI on early renal function and vascular function in patients during perimenopause with hypertension.

Patients / Materials & Methods: This study was a prospective, positive-controlled, open-label trial in which 427 perimenopausal women (30-65 years old) with mild or moderate hypertension admitted to the Department of Cardiology, Second Hospital of Lanzhou University were randomly assigned to ARNI group (n=165) or valsartan (ARB, n=262) for 24 weeks. Renal function, urinary renal function, vascular function, and 24-hour ambulatory blood pressure (24h-ABPM) were assessed at baseline and 24 weeks.

Results: There was no significant difference in clinical baseline data between ARNI group and ARB group ($P > 0.05$). Office systolic blood pressure (oSBP) and diastolic blood pressure (oDBP): there were statistically significant differences between ARNI group and ARB

group at baseline vs.24 weeks (P < 0.001). There was no significant difference in oSBP difference between ARNI group and ARB group (P =0. 608) or oDBP difference (P =0.379). At the end of follow-up, the decrease of microalbuminuria(MAU) in ARNI group was significantly higher than ARB group (P =0.09). The difference of urinary -N-acyl -β -d-glucosaminidase (NAG) in ARNI group was statistically significant (P < 0.001). The decrease of urinary β2 microglobulin (β2MGU) was statistically significant in the ARB group (P < 0.000. 1), No difference shows in glomerular filtration rate (eGFR) between the two groups. The improvement of carotid-femoral pulse wave velocity (cfPWV) in ARNI group was more significant than that in ARB group (P < 0.001). No statistical difference shows in ankle-brachial index (ABI) and cardio-ankle vascular index (CAVI).

Discussion & Conclusion: For patients during perimenopause with hypertension, ARNI has similar antihypertensive efficacy as ARB, and can improve MAU and cfPWV more.

Abstract Topic: Basic Research

Abstract ID: ORAL-200

Abstract Title: Astragaloside IV Inhibits H2O2-Induced Apoptosis in H9C2 Cells by Attenuating Oxidative Stress and Mitochondrial Damage

Presenting Author: Miaomiao Qi, Qiongying wang, Runmin Sun, Li Tian, Feng Bai, Jing Yu

Affiliations: Lanzhou University Second Hospital,Lanzhou,China

Background: Oxidative stress and mitochondrial damage play an important role in the pathology of cardiomyocytes apoptosis. However, the effects of Astragaloside IV(As-IV) on mitochondrial function have not been uncertain. Therefore, we assumed that As-IV inhibits H2O2-induced apoptosis in H9c2 cells by attenuating oxidative stress and mitochondrial damage.

Aims & Objectives: To investigate the effects and mechanisms of As-IV on H2O2-induced apoptosis in H9c2 cells.

Patients / Materials & Methods: H9c2 cells were divided into three groups, including normal control group (cultured without intervention), H2O2 group (cultured with 200μmol/L H2O2 for 2 hours), As-IV group (cultured with 100μmol/L As-IV for 1 hour), As-IV with H2O2 group (pretreated with 100μmol/L As-IV for 1 hour, then incubated with H2O2 for 2 hours). FITC/PI and DCFH-DA are stained to examine levels of apoptosis and ROS receptively. Levels of SOD and MDA were measured. Stained with JC-1 probe to observe the change of mitochondrial membrane potential (MMP). Western-blot was detected to analyze the expression of Drp-1.

Results: 1. The apoptosis rate of H2O2 group ((13.22±3. 17 vs 40. 55±13.74)%, P<0.05) was significantly higher than that of control group, which was lower in As-IV with H2O2 group((23.43±4.3 vs 40. 55±13.74)%, P<0.05).2. The ROS levels were higher in H2O2 group than control group(P<0.05), which were significant reduced in As-IV with H2O2 group. Meanwhile, the activity of MDA was increased and the activity of SOD was decreased in H2O2 group compared with that in control group. Compared with H2O2 group, As-IV with H2O2 group significantly decrease the activity of MDA and increase the activity of SOD.3. MMP was lower and the expression of Drp1 was higher in H2O2 group than that in control group. Compared with H2O2 group, MMP was significantly increased and the expression of Drp1 was downregulated.

Discussion & Conclusion: As-IV exerts protective effects on H2O2-induced apoptosis by attenuating oxidative stress and mitochondrial damage.

Abstract Topic: Others

Abstract ID: ORAL-201

Abstract Title: Blood Pressure Variability and Cognition Impairment: A Meta-Analysis

Presenting Author: Xu Zhao, Xin lin, Chengkun kou, Jing Yu

Affiliations: Lanzhou University Second Hospital, Lanzhou, China

Background: Blood pressure variability is hypothesized to play important role in development of cognition impairment.

Aims & Objectives: We aimed to explore the relationship of blood pressure variability and cognition impairment.

Patients / Materials & Methods: We searched the following databases, EMBASE, Cochrane Library, Web of Science, up to December 2019 using blood pressure variability, cognition impairment, cognition dysfunction. Randomized double blind and observational trials were included. Dementia and Alzheimer's disease cases were excluded. Two reviewers confirmed the inclusion of studies and extracted the data independently. STATA 14.0 was used to synthesize data.

Results: We included 11 studies and enrolled 17127 hypertensive patients. All studies assessed cognition function using Mini-Mental State Examination (MMSE) to assess the cognition function. Ambulatory blood pressure variability, visit-to-visit blood pressure variability, measure to measure blood pressure variability, day-to-day blood pressure variability and beat-to-beat systolic blood pressure variability were applied in included trials. The variability of systolic blood pressure has significant relationship with cognition impairment (OR,1.747[1.25,2.44], P<0.01), however, the variability of diastolic blood pressure did not show correction with decreasing cognition function scale(OR,0.912[0.81,1.03], P>0.05) by analyzing data which trial used MMSE scale. Results showed higher systolic blood pressure variability had negative relationship with attention (OR,1. 63, [1.28,1.98], P<0.01). In the aspect of memory and language function, blood pressure variability did not show a significant relationship. Higher blood pressure variability in both systolic and diastolic was associated with lower hippocampal volume and cortical infarcts.

Discussion & Conclusion: The variability of systolic blood pressure is dependently risk factor for cognition impairment in older adults with hypertension. For unsuccessfully treated hypertensive individuals (with BP ≥140/90 mm Hg),higher variability in both systolic and diastolic blood pressure was associated with cognitive damage, but these associations were not found in those controlled hypertension older adults.

Abstract Topic: Epidemiology

Abstract ID: ORAL-203

Abstract Title: Associations of Long-Term Visit-to-Visit Blood Pressure Variability with Subclinical Renal Damage and Albuminuria in Adulthood: A 30-Year Prospective Cohort Study

PresentingAuthor: Yang Wang, Peng Zhao, Chao Chu, Ming-Fei Du, Ting Zou, Gui-Lin Hu, Yue-Yuan Liao, Chen Chen, Qiong Ma,Dan Wang, Ke-Ke Wang, Fang-Yao Chen, Jian-Jun Mu

Affiliations: First Affiliated Hospital of Xian Jiaotong University, Xi'an, China

Background: Recent evidence indicates that long-term visit-to-visit blood pressure variability (BPV) may be associated with the risk of cardiovascular disease, independent of mean BP levels.

Aims & Objectives: To determine the potential associations of long-term BPV from childhood to middle age with subclinical renal damage (SRD) and albuminuria in adulthood, independently of mean BP and cumulative exposure to BP.

Patients / Materials & Methods: Using data from the ongoing cohort of Hanzhong Adolescent Hypertension study, which recruited children and young adults aged 6 to 18 years at baseline, we assessed BP variability by standard deviation (SD) and average real variability (ARV) for 30 years (6 visits).

Results: During a follow-up of 30 years, of the 1115 participants, 146 SRD events occurred. After adjustment for demographic, clinical characteristics and mean BP during 30 years, higher SDSBP, ARVSBP, SDDBP, ARVDBP, SDMAP and ARVMAP were significantly associated with higher risk of SRD [ORs (95% CIs) were 1.06(1.03-1. 10), 1. 12(1.06-1. 19), 1. 17(1. 11-1.23), 1.22(1. 13-1.32), 1. 13(1.08,1. 19) and 1.21(1. 12-1.31), respectively]. When we used cumulative exposure to BP from childhood to adulthood instead of mean BP as adjustment factors, results were similar. In addition, greater long-term BPV was also associated with the risk of albuminuria [ORs (95% CIs) were 1.06(1. 12-1. 10) for SDSBP, 1. 12(1.06-1. 19) for ARVSBP, 1. 14(1.08-1.21) for SDDBP, 1. 19(1. 10-1.30) for ARVDBP, 1. 13(1.07-1. 19) for SDMAP, and 1.20(1. 11-1.32) for ARVMAP] adjusting for demographic, clinical characteristics, mean BP or cumulative exposure to BP during 30 years.

Discussion & Conclusion: Long-term BP variability for 30 years from childhood to middle age was associated with higher risk of subclinical renal damage and albuminuria in adulthood, independent of mean BP or cumulative exposure to BP during follow-up. Identifying long-term BP variability from early age may assist in predicting renal disease and cardiovascular disease in later life.

Abstract Topic: Prevention

Abstract ID: ORAL-208

Abstract Title: Prevalence and Control of Diabetes in Ulaanbaatar, Mongolia

PresentingAuthor: Orkhonselenge Davaadamdin, Bolor-Erdene Ganbat, Uurtsaikh Baatarsuren, Khulan Tuvdendarjaa, Maral Myanganbayar, Myagmartseren Dashtseren, Naranbaatar Dashdorj, Naranjargal Dashdorj

Affiliations: Onom foundation,Ulaanbaatar,Mongolia

Background: In Mongolia, Hypertension (HTN) and diabetes are listed as the most common and detrimental risk factors of cardiovascular diseases in the country. Therefore, the control of diabetes among the population is one of the important measures for the successful management of CVD prevalence.

Aims & Objectives: To determine the prevalence of diabetes and impaired glucose tolerance in the Ulaanbaatar adult population; to investigate for possible gaps in clinical care by assessing people's awareness, treatment, and control of the disease; to examine the trends in

Patients / Materials & Methods: A representative sample of 4515 participants aged 20 years and above living in 9 districts of Ulaanbaatar, were randomly selected and examined in a cross-sectional survey. The survey was conducted using a Mongolian version of the WHO STEPS Instrument for Non-communicable Disease Risk Factor Surveillance. For the laboratory analysis, half of the selected participants aged 20 years and above were recruited (n=2169).

Results: The overall prevalence of diabetes was estimated to be 5.9% (n=128) in the Ulaanbaatar adult population aged 20 and above. The prevalence among men was 7.2% (n=70) and among women was 4.8% (n=58).

The overall prevalence of impaired fasting glycemia (IFG), or prediabetes, was 8. 1% (n=175). The prevalence among men was 9.9% (n=96) and among women was 6. 6% (n=79).

Among all diabetic patients (n=128), 46,6% were unaware they had diabetes, 14,5% aware of diagnosis but untreated, 32,8% were treated but uncontrolled, and only 6,1% and 15% were controlled (among all diabetics and diabetics on the sugar-lowering treatment, respectively).

Diabetes was significantly higher in men than in women (OR=1. 5, P <.05). The prevalence of diabetes also increased with age, as the prevalence in the older age group (50+ years old), compared to the youngest age group (20-29), was significantly greater (OR=7,62, P <.0001). Comparing the youngest (20-29 years) and oldest (50+ years) participants with diabetes, more older participants were aware of their diagnosis (85.7% versus 34. 6%, OR=5.09, CI 1.94-13.39, P<0.001), and were better controlled (0% versus 7.4%, OR=9.8, CI 1.09-88.27, P < 0.05).

Discussion & Conclusion: The prevalence of diabetes and prediabetes has not declined since 2013 in Mongolia. However, the large gap in sex specific prevalence as well as in diabetes awareness, treatment and control is demands major improvements in the health and care system.

Abstract Topic: Complications

Abstract ID: ORAL-209

Abstract Title: A Retrospective Stroke Study in Ulaanbaatar Mongolia

Presenting Author: Maral Myanganbayar, Orkhonselenge Davaadamdin, Nomin-Erdene Bayarsaikhan, Uurtsaikh Baatarsuren, Andreas Bungert, Naranbaatar Dashdorj, Naranjargal Dashdorj

Affiliations: Onom Foundation, Ulaanbaatar, Mongolia

Background: For the past 2 decades, cardiovascular disease has been consistent in being the leading cause of death in Ulaanbaatar, Mongolia since rapid urbanization occurred a decade after the country embraced democracy. In 2016, according to Global Burden of Diseases, it was shown that mortalities due to hemorrhagic stroke was 4 times higher than world average.

Aims & Objectives: In December 2017, global initiative Better Hearts Better Cities (BHBC) was implemented in Ulaanbaatar, Mongolia. To assess the impact of BHBC on stroke, a retrospective study was conducted to collect stroke data from 3 districts (out of 8) of Ulaanbaatar

Patients / Materials & Methods: District hospital staff members pulled paper patient records from their archive room in advance, based on a digital registry. Patient records were screened for an ICD-10 for stroke. The data collectors were provided a template file to gather the data on their laptops or excel sheet and data collection procedure was dependent on the hospital decision. All analysis was done on SPSS version 26.

Results: Total of 1362 stroke patient was hospitalized from 2015-2020, with 51.8% male and 48.2% female. Most were people aged 45-59 (41.7%) and 60-69 (25.0%). Most stroke incidents were diagnosed with I61 (nontraumatic intracerebral hemorrhage) 30% and half of the stroke patients were diagnosed with I63 (cerebral infarction). Incidences of I61 was rather consistent with 31% in 2015 through 2018 and decreased to 21% in 2019, whereas I63 was 45.0% in 2015, and peaked to 64% in 2019 and went down to 48.9% in 2020. Risk factors of hospitalized patients had 82.3% hypertension, diabetes 13%, hyperlipidemia 23%, smoking 34% and alcohol consumption 29%.

Discussion & Conclusion: Stroke related hospitalizations, namely I61 and I63 had decreased over the years, which could be an indication that BHBC initiative made a positive impact. Limitations include the data collected may be incomplete. Prospective study with inclusion of rest of the districts is needed.

Abstract Topic: Basic Research

Abstract ID: ORAL-210

Abstract Title: Caspase-11-Gasdermin D-Mediated Pyroptosis in Macrophages is Involved in the Pathogenesis of Atherosclerosis

PresentingAuthor: Xuejing Sun

Affiliations: Department of Cardiology, Third Xiangya Hospital, Changsha, China

Background: Pyroptosis is a form of cell death triggered by proinflammatory signals and recent studies have reported that oxidized phospholipids function as caspase-11 agonists to induce noncanonical inflammasome activation in immune cells. Caspase-11 is a cytosolic endotoxin (lipopolysaccharide (LPS)) receptor, mediating pyroptosis under conditions of LPS stimulation in endotoxemia and bacterial sepsis.

Aims & Objectives: As the levels of oxidized phospholipids derived from ox-LDL are largely elevated in atherosclerotic lesions, this study sought to determine whether oxidized lipids trigger pyroptosis and subsequent inflammation in the pathogenesis of atherosclerosis.

Patients / Materials & Methods: Firstly, we integrate transcriptomic data available from the Gene Expression Omnibus (GEO) with data from hyperlipidemic mice and ox-LDL-treated peritoneal macrophages. Secondly, mRNA expression of caspase-4 and gasdermin D was tested in PBMCs from patients with coronary heart disease. Thirdly, we tested the expression of caspase-4 and the associated with the severity of lesions in the coronary arteries in patients. Forthly, in vivo study was conducted to determine whether caspase-11-gasdermin D activation occurred in response to a high-fat/high-cholesterol (HFHC) diet in ApoE-/- mice. Fifthly, we used Caspase-11-/- and ApoE-/-Caspase-11-/- mice to show whether caspase-11 deletion could attenuate vascular remodeling. Sixthly, we conducted in vitro mechanistic study to explore whether caspase-11-mediated inflammation occurred via gasdermin D-mediated pyroptosis in macrophages. Seventhly, suppressing gasdermin D was applied in HFHC-fed ApoE-/- mice via delivery of an adeno-associated virus to determin whether suppressing gasdermin D could decrease atherosclerotic volume and infiltrating macrophage numbers.

Results: After integrating transcriptomic data available from the GEO database with data from hyperlipidemic mice and ox-LDL-treated peritoneal macrophages, we discovered that caspase-4/11-gasdermin D-associated inflammatory signaling was significantly activated. Consistently, the mRNA expression of caspase-4 and gasdermin D was upregulated in peripheral blood mononuclear cells (PBMCs) from patients with coronary heart disease. In particular, the expression of caspase-4 was closely associated with the severity of lesions in the coronary arteries. An in vivo study showed that caspase-11-gasdermin D activation occurred in response to a high-fat/high-cholesterol (HFHC) diet in ApoE-/- mice, while caspase-11 deletion largely attenuated the volume and macrophage infiltration of atherosclerotic lesions. An in vitro mechanistic study showed that caspase-11-mediated inflammation occurred partly via gasdermin D-mediated pyroptosis in macrophages. Suppressing gasdermin D in HFHC-fed ApoE-/- mice via delivery of an adeno-associated virus markedly decreased lesion volume and infiltrating macrophage numbers.

Discussion & Conclusion: Caspase-11-gasdermin D-mediated pyroptosis and the subsequent proinflammatory response in macrophages are involved in the pathogenesis of atherosclerosis. Therefore, targeting the caspase 11-gasdermin D may serve as an alternative strategy for the treatment of atherosclerosis.

Abstract Topic: Prevention

Abstract ID: ORAL-214

Abstract Title: Impact of Cardiac Biochemical Parameters on Tolerance Time in TMT among Nursing Students

PresentingAuthor: Rashmi P John and Narsingh Verma

Affiliations: King George's Medical University, Lucknow, UP, India

Background: Cardio-respiratory fitness is a well-established indicator of a person's overall health status. Knowledge about the various pathways leading towards a better cardio-respiratory fitness is crucial for the development of appropriate therapeutic interventions.

With growing epidemiological and clinical evidences, researcher has noticed an increase in incidence of mortality related to cardiovascular disorders among young adults. With proper screening techniques like TMT, this can become an avertable situation. As, TMT helps to predict cardiovascular abnormalities in early stages. In this view the researcher planned to investigate the impact of cardiac Biochemical parameters on tolerance time in TMT.

Aims & Objectives: The aim of the study is to find out the impact of cardiac Biochemical Parameters on tolerance time in TMT.

Patients / Materials & Methods: Quantitative research approach and exploratory research design was adopted for this study. 150 BSc Nursing students from KGMU College of Nursing were selected for this study. Association and correlation between cardio-respiratory determinant and demographic variables and cardiac biochemical parameters were analysed using inferential and non-inferential statistical method.

Results:: The study result projects that, tolerance time in TMT is associated with age (0.026) and moderately positively correlated with age (0.315). The variables TSH (0.031), 2D ECHO (0.008), and Peak Exploratory flow rate (0.013) are associated with tolerance time of TMT. The variable such as TSH is slightly positively correlated (0.201),2D Echo (0.365) and a Peak Expiratory Flow Rate are moderately positively correlated (0.343) with tolerance time in TMT.

Discussion & Conclusion: Study result projects that, the tolerance time in TMT is not only having an association with age but also exhibits a moderately positive correlation to it. Furthermore, TSH is seen to have a slight Positive correlation, a moderately positive correlation is manifested between 2D Echo and Peak Expiratory Flow Rate to Tolerated time in TMT.

Abstract Topic: Basic Research

Abstract ID: ORAL-216

Abstract Title: Prevalence of Hypertension in Tobacco users Attending Tobacco Cessation Clinic

PresentingAuthor: Anjali Singh and Narsingh Verma

Affiliations: King George's Medical University,Lucknow, UP, India

Background: Tobacco and hypertension are respectively the first and second leading cause of preventable mortality worldwide. The effect of tobacco on blood pressure is complex with evidence that tobacco increase blood pressure acutely and increase the risk of developing hypertension.

Aims & Objectives: The objective of this study was to examine the impact of tobacco use on blood pressure among tobacco users.

Patients / Materials & Methods: In this study we recruited total 80 tobacco using subjects and measured their systolic and diastolic blood pressure in the outpatient department (OPD) of KGMU.

Results: The effects of tobacco use on the risk of development of hypertension were assessed from a lifelong perspective. Study participants aged between 50±13. Use of tobacco was positively associated with the risk of hypertension. Systolic BP of these tobacco using subjects was 130.938±21.039 mmHg and the diastolic BP of was 83.425±21.039 mmHg.

Discussion & Conclusion: Study concluded that use of tobacco is a risk factor for hypertension and it has association to cardiovascular and cerebrovascular complications. However, both use of tobacco and smoking increase the risk of development of hypertension as well as atherosclerosis. Tobacco causes an acute increase in blood pressure.

Abstract Topic: Basic Research

Abstract ID: ORAL-218

Abstract Title: Pulmonary Functions Tests in Hypertensive COVID 19 Survivors

Presenting Author: Pragati Raghuwanshi, Rachna parashar, Ankur Joshi, RajnishJoshi, Abhishek Goyal, Sandip Hulke

Affiliations: Department of Physiology, AIIMS, Bhopal, MP, India

Background: Hypertension, as one of the common co-morbidities found in patients with coronavirus disease 19 (COVID-19), imposes stresses on many organs like the heart, kidney and lungs. The risk factors associated with pulmonary function are unknown in COVID 19 survivors.

Aims & Objectives: To study the pulmonary function tests in COVID 19 survivors with hypertension.

Patients/Materials & Methods: Hospital-based comparative cross-sectional prospective study was conducted on 256 COVID-19 survivorsof both sexes in the age group of 18-65 after 2 weeks from hospital discharge(recovery from disease). Pulmonary functions assessed using NDD Digital Spirometer in all enrolled COVID 19 survivors. The Data was collected and entered from June 2021-September 2021. Descriptive analysis was done by measuring central tendency in terms of median and IQR.

Results: The median values of FVC% (L), FEV1 % (L), FIVC% (L) were 66 (56, 77), 67 (57,79), 63(35,74) in hypertensive patients and 74(59,83), 75(60,85), 72(44,83) in non hypertensive, respectively. These median values were significantly lower ($p < 0.005$) in hypertensive as compared to non hypertensive group. Restrictive pulmonary defect was dominant in hypertensive patients.

Discussion & Conclusion: Pulmonary Function Test are affected in COVID 19 survivors with Hypertension.Routine check up of the pulmonary functions status of such patients should be done to monitor undesired outcomes.

Abstract Topic: Others

Abstract ID: ORAL-219

Abstract Title: A Nonlinear Relationship Between Non-High-Density Lipoprotein Cholesterol and All-Cause or Cause-Specific Mortality in Adult Population

PresentingAuthor: Yu Huang

Affiliations: Guangdong provincial people's hospital, Guangzhou, China; Guangdong academy of medical sciences, guangzhou, China

Background: Non-high-density lipoprotein cholesterol (non-HDL-C),which is calculated by subtracting high-density lipoprotein cholesterol (HDL-C) from total cholesterol, has been reported to be a more accurate predictor of clinical outcomes than conventional lipid measurements.

Aims & Objectives: The associations of non-HDL-C with mortality are still unclear. We aimed to explore the associations of non-HDL-C with all-cause and cause-specific mortality in an adult population.

Patients / Materials & Methods: Participants were enrolled from 1999 to 2014 National Health and Nutrition Examination Survey (NHANES) that had mortality status through 31 December 2015. Deaths were classified into all-cause and cardiovascular mortality. Survival curve, multivariate Cox regression, and subgroup analyses were conducted, and hazard ratio (HR) and 95% confidence interval (CI) were performed. We fitted Cox regression models for all-cause and cardiovascular mortality to evaluate their associations with categories of non-HDL-C.

Results:A total of 32,405 (15378 (47.46%) males, mean age 46. 13±17.26 years) subjects were enrolled. At an average follow-up of 98.40 months, all-cause and cardiovascular mortality numbers were 2859 (8.82%) and 551 (1.70%). When compared with the reference group (non-HDL-C: 4.26 ± 0. 19 mmol/L), a nonlinear association was apparent for all-cause mortality, with elevated risk in participants with the lowest non-HDL-C concentration (HR=1. 53 ;95%CI=1.35-1.74). The effect of non-HDL-C on mortality was adjusted by some traditional risk factors including age, gender, race, or comorbidities.

Discussion & Conclusion: A nonlinear association was observed between non-HDL-C and all-cause mortality among an adult population.

Abstract Topic: Hypertension in Women

Abstract ID: ORAL-220

Abstract Title: Enigmatic Relationship of Sympathetic Vascular Reactivity with Age During Pregnancy.

PresentingAuthor: Amit Kant Singh, Reena Rani Verma

Affiliations:

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Background: Pregnancy is a physiological condition associated with adaptive changes in the maternal hemodynamics and cardiovascular system. Autonomic nervous system plays a central role in this adaptation to the various needs of pregnancy. In some studies, increased sympathetic activity as well as decreased vagal tone has been found to be associated with one of the well known complication pregnancy induced hypertension/ preeclampsia. Vascular reactivity is defined as the responsiveness of a blood vessel to a specific stimulus. It is the balance between vasoconstrictor and vasodilator factors which is of utmost importance when assessing vascular reactivity. Autonomic functions impairment has been suggested as one of the cause of pregnancy induced hypertension. Blood pressure (BP) reactivity to the cold pressor test (CPT) has been suggested as a one of the predictor of hypertension.

Aims & Objectives: To find relationship of Sympathetic Vascular Reactivity with Age During Pregnancy

Patients/Materials & Methods: Pregnant females with gestation age of 7-8 weeks as per the ultra-sonographic reports were recruited in the study. The baseline SBP, DBP and change in SBP and DBP during CPT were recorded respectively in different age groups.

Results: It was found that resting SBP and DBP increased up to certain maternal age limit and then a declining trend was seen thereafter.

Discussion & Conclusion: As per the observations it was found that there is an variable relationship of sympathetic vascular reactivity with age in pregnancy. Early detection of high risk patients is essential for prophylactic interventions to reduce morbidity & mortality associated with this syndrome.

Abstract Topic: Hypertension in Women

Abstract ID: ORAL-221

Abstract Title: Changing Trends of Resting Blood Pressure in Pregnancy with Maternal Age.

PresentingAuthor: Reena Rani Verma and Amit Kant Singh

Reena Rani Verma: SVS Medical College, Mahabubnagar, India

Amit Kant Singh: Department of Physiology, UP University of Medical Sciences, Saifai, Etawah, UP, India

Background: Pregnancy is a physiological condition associated with profound adaptive changes in the maternal hemodynamics and cardiovascular system. Autonomic nervous system plays a central role in this adaptation to the various needs of pregnancy. As per the literature there is sympathetic nervous system and parasympathetic nervous system compensation of cardiovascular function in response to an age related decrease in baroreceptor sensitivity. It has also been reported that there is reduced neuronal reuptake or systemic plasma clearance of noradrenaline, with age which would result in greater plasma noradrenaline concentrations in response to a particular stress-evoked increase in sympathetic nervous system activity. Thus,

sympathetic nervous system tone of the heart is increased. Differences in hemodynamic adaptations related to pregnancy and ageing may be associated with differences in blood pressure levels during pregnancy. Thus, it can be stated that due gradual loss of vascular compliance along with decreased baroreceptor sensitivity with age leads to increase in BP.

Aims & Objectives: To study the Changing trends of resting blood pressure in pregnancy with maternal age.

Patients / Materials & Methods: The study was conducted among pregnant women with 7 weeks of gestation and they were divided into different age groups.

Results: Older maternal age was associated with higher blood pressure.

Discussion & Conclusion: Thus, it can be concluded that the differences in blood pressure levels with age might be part of the underlying mechanism explaining the association between advanced maternal age and Gestational hypertensive disorders in pregnancy.

Abstract Topic: Epidemiology

Abstract ID: ORAL-223

Abstract Title: The Current Situation of Dietary Intake and Its Association with Body Fat among Children and Adolescents Aged 6-16 Years in Beijing

PresentingAuthor: Yiwen Huang and Yinkun Yan

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Background: With the rapid development of China's economy, the dietary nutritional structure—high energy, high fat, high protein and low dietary fiber—are more common. In recent years, the prevalence of obesity in Chinese children and adolescents is increasing year by year. The excessive accumulation of adiposity in the body will not only reduce the physical development level of obese children, but also lead to a series of short-term and long-term health damage.

Aims & Objectives: To understand the current situation of dietary intake among children and adolescents in Beijing and explore its relationship with body fat, so as to provide evidence-based basis for further targeted strategies on improving children's dietary status.

Patients/Materials & Methods: Children and adolescents were selected in 30 schools (8 primary schools, 21 middle schools and 1 12-year education school) in Miyun, TongZhou, Fangshan and Dongcheng Districts of Beijing by using a stratified cluster sampling method from November 2017 to January 2018. The survey included e-questionnaire (general demographic characteristics, life behavior variables, socioeconomic variables, etc.) and physical examination (height, weight measurement and body fat test). A total of 14 945 children and adolescents aged 6-16 years were included. According to the American Heart Association criteria, the status of dietary was categorized as poor, intermediate and ideal.

Results:he proportions of children and adolescents with ideal, intermediate and poor dietary status were 19.4%, 52.8% and 27.8%, respectively. Fat mass index and fat mass percentage were negatively correlated with dietary status after adjusting for confounding factors ($P<0.05$).

Discussion & Conclusion: The dietary status of children and adolescents aged 6-16 in Beijing was not optimistic, and poor dietary status may lead to fat accumulation among children. Therefore, targeted dietary guidance should be put forward at family, school and social levels to reduce the risk of obesity in children and adolescents.

Abstract Topic: Nonpharmacological Management

Abstract ID: ORAL-226

Abstract Title: Study to Evaluate Impact of Navratri Diet on Blood Pressure

PresentingAuthor: Abhishek Arun* and Nar Singh Verma[1]

Authors And Affiliations: *Tender Palm Hospital, Lucknow, UP, India, [1]King George Medical University, Lucknow, UP, India

Background: The festival of Navratri is a Hindu festival which is celebrated with much fervour and joy all over north India to mark the victory of the Goddess Durga over evil. During this nine-day festival, people from Hindu community follow a ritual of fasting and avoid food grains like wheat, pulses, rice and also to limit to rock salt intake for nine days.

Aims & Objectives: The study aims to highlight the importance of Navratri diet and also look for improvement in blood pressure and other metabolic parameters.

Patients / Materials & Methods: It was a prospective study which was conducted during Navratri October 2020 in Lucknow, India over a period of 14 days in 50 subjects. Subjects were advised to follow the prescribed Navratri diet during the course of study. Blood pressure and blood sugars were constantly monitored on day to day basis. Other parameters like weight, waist hip ratio and BMI were also recorded during the start and end of study.

Results: Majority of patients 19 (38%) were in age group 35-45 years of age.28 (56%) male subjects participated in study and majority study subjects (64%) belonged to urban areas. There was a significant reduction ($p<0.001$) in both SBP and DBP from the start to end of study (136.44/96.40 to 131.42/83.36).

Discussion & Conclusion: Navratri diet can be sought as an effective lifestyle intervention in combating hypertension especially in today's modern world.

Abstract Topic: Pharmacological Management

Abstract ID: ORAL-228

Abstract Title: Efficacy and Safety of Indapamide, Perindopril and Amlodipine FDC in Newly Diagnosed Primary Hypertensives with T2DM

Presenting Author: Supratik Bhattacharyya

Affiliations: SKN Diabetes and Endocrine Centre, Naihati, India

Background: Outbreak of COVID-19 pandemic and lockdown posed immense challenges in managing patients with hypertension. Persistent high blood pressure in T2DM patients is known to be associated with poorer outcomes in patients who acquire COVID-19 infection, independent of their glycemic status. Evidence from Hypertension Screening and Treatment Program (HSTP) Study which looked into the long-term effect on kidney, revealed that those with baseline SBP - 160 to 179 mm Hg were twice as likely to be Dialysis dependent.

Aims & Objectives: Aim of the study was to identify T2DM patients who presented to the clinic with high blood pressure (>160 mm Hg Systolic or >90 mm Hg Diastolic) and were drug naïve, and were initiated on a FDC of Indapamide, Perindopril and Amlodipine. Their blood pressu

Patients / Materials & Methods: The data of T2DM Patients (N=50) who recorded a clinic blood pressure of>160 mm Hg Systolic or >90 mm Hg & Diastolic (2 readings taken one week apart) at first visit, who were initiated on a FDC of Indapamide(1.25 mg), Perindopril(4 mg) and Amlodipine(5 mg) and their blood pressures was analysed from an electronic data-base retrospectively.

Results: In our study, T2DM Patients (N=50), females (N=16) & males (N=34) with mean age (52.9±9. 68) years, mean weight (73.86±12.45) kg and mean BMI (25.29±4. 1) and mean HBA1c (7.23±1.36) and mean Serum Creatinine (0.99±0.21) with a mean baseline Sytolic BP (168.30±8.91) mmHg and mean Diastolic BP (102.3±3.33) mmHg.

4 weeks post initiation of FDC (Indapamide, Perindopril and Amlodipine), mean Systolic BP (144.93±10.09) mmHg and mean Diastolic BP (88. 13±7.20) mmHg. 12 weeks post initiation of FDC ((Indapamide, Perindopril and Amlodipine), mean Systolic BP (130.93±10.8) mmHg and mean Diastolic BP (82.40±4. 57) mmHg.

Mean change in Systolic BP from baseline at 4 weeks was -23.40 mmHg (p<0.001) and at 12 weeks was-37.40 mmHg (p<0.001)

Mean change in Diastolic BP from baseline at 4 weeks was -14.2 mmHg (p<0.001) and at 12 weeks was-19.9 mmHg (p<0.001)

All patients continued with their treatment for the entire duration of the study. 1 out of 50 patientscomplained of first dose hypotension. None complained of postural hypotension

Discussion & Conclusion: Intensive & early treatment of uncontrolled hypertension is necessary to prevent complications and improve outcomes in T2DM patients. Studies have shown only 10% patients with single agent and 40% with duel agents achieve optimal BP control. A vast majority requires triple agents to achieve satisfactory BP lowering in T2DM patients. A FDC of Indapamide, Perindopril and Amlodipine has shown to be effective in lowering both Systolic as well as diastolic BP in T2DM patients significantly and achieved target BP effectively within a short time without any additional safety concerns. The triple drug FDC is well tolerated and increases treatment compliance. It is a rational combination which addresses the basic pathophysiology of the disease and may be used routinely for initiation in patients with high baseline blood pressure instead of the conventional stepwise approach. Limitation of the study are the relatively small sample size and the short duration of the study.

Abstract Topic: Epidemiology

Abstract ID: ORAL-233

Abstract Title: Prevalence of Hypertension and Type-2 Diabetes Mellitus in Primary Care Setting in Eastern India – A Cross-Sectional Study

PresentingAuthor: Bijay Patni

Affiliations: Medicine, DRWA, Kolkata, WB, India

Background: Diabetes mellitus and hypertension are inter-related diseases that strongly predispose an individual to atherosclerotic cardiovascular disease. [9,10] Hypertension is about twice as frequent in individuals with diabetes as in those without. The prevalence of coexisting hypertension and diabetes appears to be increasing in industrialized nations because populations are aging and both hypertension and non-insulin dependent diabetes mellitus incidence increases with age. Indeed, an estimated 35-75% of diabetic cardiovascular and renal complications can be attributed to hypertension. [9,10] Hypertension also contributes to diabetic retinopathy, which is the leading cause of newly diagnosed blindness. For all these reasons, hypertension and diabetes should be recognized and treated early and aggressively

Aims & Objectives: We intend to study the prevalence of hypertension and Type-2 diabetes in a primary care setting in routine clinical care setting

Patients / Materials & Methods: A total of 785 patients coming to our clinic were studied and evaluated for blood pressure (BP), and plasma glucose measurements were done simultaneously (either post-prandial plasma glucose or random plasma glucose) in the same set of patients.

Study Design: A cross-sectional observational study following a convenience sampling method in a primary care setting.

Results:: A total of 785 patients were included in the study among which, 478 (63.73%) were males, 278 (36.27%) were females. The mean age of the patients were 55.43 ± 8.71 years. A total of 276 (35.16%) were of normal BMI, 227 (28.92%) were overweight, and 252 (32.1%) were obese. Prevalence of hypertension noted in 257 (32.73%) patients in the overall study population. In the overall cohort of 785 patients, BP was normal in 249 (31.72%), 279 (35. 54%) patients were prehypertensive, 145 (18.47%) patients were in stage-1 hypertension, and 112 (14.27%) had stage-2 hypertension, thereby resulting in a total of 257 (32.73%).A total of 122 patients were found

to have a blood glucose value of 200 or more and 40 patients were already known T2DM patients, thereby resulting in a prevalence of 162/785 (20.63%). Out of these 162 patients with diabetes mellitus, 39 patients were normotensives (24.07%), 48 (29.63%) were pre-hypertensives and the remaining 75 were hypertensives(46.29%). Hence, we see a higher prevalence of hypertension in the subgroup of diabetes patients (46.29%) versus 32.73% in the overall study population, p=0.003, as computed by chi-square test

Discussion & Conclusion: From the present study, we would like to conclude that, the prevalence of hypertension is increasing in patients with diabetes mellitus. Hence, there should be early evaluation for hypertension and periodic evaluation of patient with pre hypertension, applying life style modifications and prompt treatment of hypertension and hyperglycemia which in turn will favor the good outcome in our patients.

Abstract Topic: Epidemiology

Abstract ID: ORAL-234

Abstract Title: Prevalence and Risk Factors of Prehypertension and Hypertension: A Cross-Sectional Study

Presenting Author: Afroz Abidi*, GhizalFatima[1], Ammar Mehdi[2], Himali Jha[3]

Affiliations: *Era Medical College Lucknow, Lucknow, UP, India, [1]Biotechnology, Era Medical College, Lucknow, UP, India,[2]Lucknow University, Lucknow, UP, India, [3]Hind Institute of Medical Sciences, Lucknow, UP, India

Background: Prevalence of Hypertension (HTN) is rapidly increasing in developing countries leading to high cardiovascular and cerebrovascular morbidity & mortality

Aims & Objectives: The objective of this study was to determine the prevalence and risk factors of Pre-HTN and HTN.

Patients/Materials & Methods: This was an epidemiological community based study done in urban population. A questionnaire was designed to collect information on demographic data, family income, education, marital status, smoking / tobacco intake, dietary history, physical activity and past history of diseases like HTN, hyperlipidemia, diabetes and any other significant history. Physical examination was performed to assess height, weight, waist and hip ratio and Blood Pressure (BP) measurement as recommended by WHO. Fasting blood sample for measurement of glucose & total cholesterol were done from all participants. JNC-7 (Joint National Committee-7) criteria was used for classifying HTN.

Results: Descriptive statistics were done and logistic regression was performed to determine the association of hypertension with its concomitant risk factors. Out of total 1646 recruits, only responses from 1592 subjects were analyzed as rest gave incomplete information or refused to participate. Study subjects aged 25-65 years were included in study. The prevalence of HTN was 36.8 % (male 29.2% and female 41.3 %). Mean systolic and diastolic BP were 125.26 ± 12.04 mmHg and 72.92 ± 10. 50 mm Hg respectively. HTN was highest in 55-65 years age group (69%) and pre-HTN highest in 35-45 years (38%). Higher odds was found in female subjects, eldest age group, upper socio-economic status, literate and married subjects. Body Mass Index (BMI) and waist hip ratio were higher in HTN group as compared to pre-HTN & non HTN group. Smoking ($p<0.001$), alcohol consumption ($p<0.001$), obesity ($p<0.001$) elevated LDL cholesterol ($p<0.05$) other cardiovascular disease ($p<0.001$), diabetes ($p<0.05$) were significantly associated with HTN.

Discussion & Conclusion: The prevalence of HTN and its associated risk factors was higher in our study population. Hence it calls for increased awareness and long term preventive control measures for pre-HTN group and appropriate treatment guidelines for HTN group to prevent further complications.

Abstract Topic: Prevention

Abstract ID: ORAL-236

Abstract Title: Personalized Medicine: A Modern Approach for the Diagnosis and Management of Hypertension

Presenting Author: Farzana Mahdi and Ghizal fatima

Affiliations: Era University, Lucknow, UP, India

Background: The main goal of treating hypertension is to reduce blood pressure to physiological levels and thereby prevent risk of cardiovascular disease and hypertension-associated target organ damage. Despite reductions in major risk factors and the availability of a plethora of effective antihypertensive drugs, the control of blood pressure to target values is still poor due to multiple factors including apparent drug resistance and lack of adherence.

Aims & Objectives: Treating hypertension by personalized medicine

Patients/Materials & Methods: An explanation for this problem is related to the current reductionist and 'trial-and-error' approach in the management of hypertension, as we may oversimplify the complex nature of the disease and not pay enough attention to the heterogeneity of the pathophysiology and clinical presentation of the disorder. Taking into account specific risk factors, genetic phenotype, pharmacokinetic characteristics, chronobiology and other particular features unique to each patient, would allow a personalized approach to managing the disease.

Results: Personalized medicine therefore represents the tailoring of medical approach and treatment to the individual characteristics of each patient and is expected to become the paradigm of future healthcare.

Discussion & Conclusion: The advancement of systems biology research and the rapid development of high-throughput technologies, as well as the characterization of different –omics, have contributed to a shift in modern biological and medical research from traditional hypothesis-driven designs toward data-driven studies and have facilitated the evolution of personalized or precision medicine for chronic diseases such as hypertension.

Abstract Topic: Hypertension in Young

Abstract ID: ORAL-240

Abstract Title: Role of Vedic Spiritual Science in Smoking Cessation Program: Marked Risk Reduction of Hypertensive Heart Disease in College Students.

PresentingAuthor: Naresh Sen* and Sonal Tanwar[1]

Affiliations: *Baba Yogi Neta Nath Hospital, Bhiwani, India, [1]HG SMS Hospital, Jaipur, Rajasthan, India

Background: Hypertension is a key risk factor for heart disease which is leading mortality cause across the globe. In Asia Pacific region due to large population the burden of hypertension is high and rising specially in young people. Cigarette smoking is a common risk factor for hypertensive heart disease (HHD)in young individuals.

Aims & Objectives: We, therefore, evaluated the effect of cigarette smoking on HHD risk in a large cohort of college students. Assessment for Cigarette smoking cessation program and risk reduction of hypertensive heart disease and its complications.

Patients/Materials & Methods: The multicentric cohort study population was composed of 11527 different college students with mean age 21+/-3. 5 year, male /female (65% : 35%). We excluded hypertensive, diabetic, obese, dyslipidaemia and positive family history of CHD. We divided study population under two groups, group A – Smoker (n = 3521) male vs female (82 % vs 18%) and group B– Non-smoker (n = 8006). We enrolled all individuals for smoking cessation program on based of spiritual vedic sciences like Shreemad-Bhagvad Geeta, Music, Yoga /Meditation and Satvic Diet. Individualswere prospectively followed up for a mean of 10 years with basic investigation like Blood pressure, blood glucose, ECG and Echocardiogram for left ventricular hypertrophy (LVH), Strain rate, LV function and carotid intima media thickness.

Results: Afterten years of study we divided the study population in three groups, group A – Non-smoker(n = 6736), group B– Quit smoking (n = 1332) and group C– Current smoking (n = 1598).The data among three groups, group A – Non-smoker, group B– Quit smoking and group C– Current smoking revealed hypertension (3.2%, 4.4% and 13%, p<0.003), diabetes(1.4%, 2.1% and 5%, p<0.002), LVH(1.9%, 3.2% and 9%, p<0.004), LV Diastolic dysfunction(2.0%, 3.9% and 14.2%, p<0.003), Strain abnormality(3.1%, 4.0% and 16%, p<0.003), Stroke rate (1.2%, 1.8% and 5.2%, p<0.004), acute coronary syndrome(0.8%, 1.3% and 3.4%, p<0.005) and sudden cardiac death(0.05%, 0. 17% and 0. 5%, p<0.004).

Discussion & Conclusion: Discussion:

Spiritual Vedic Sciences is an integration of spiritual thoughts, yoga, music, meditation with sattvic diet which lead to quit smoking by changes of personality. Improved behaviour could reduce the oxidative stress and metabolic stress on the fundamental basis of relaxation, reduce inflammation, maintain arterial elasticity or reduce risk of arterial stiffness and improvement of heart rate variability.

Conclusion: Smoking cessation program is a beneficial tool for primary prevention of HHD. It reduces about three folds risk of coronary heart disease and sudden cardiac death.

Abstract Topic: Prevention

Abstract ID: ORAL-242

Abstract Title: Better Reduction of Blood Pressure with Combined Integrated Indian Yoga and Chinese Aerobicsversus Indian Yoga or Chinese Aerobic Exercise Alone.

PresentingAuthor: Naresh Sen* and Sonal Tanwar[1]

Affiliations: *Baba Yogi Neta Nath Hospital, Bhiwani, India, [1]HG SMS Hospital, Jaipur, Rajasthan, India

Background: Yogaor aerobic tai chi (chinese aerobics) exercise can help lower the blood pressure naturally and reduce hypertension induced by stress. Apart of Chinese aerobics like tai chi, here is a list ofintegrated Indian yoga to lower the high blood pressure. 1. Uttanasana (Standing forward bend pose)2. Viparita Karani (Legs-up-the-wall pose)3. Adho mukha svanasana (Downward-facing dog pose)4. Pashchimottanasana (Seated Forward Bend Pose) 5. Modified Rajyog meditation with music 6 Surya namaskar(sun salutation) 7. Pranayam(Anulom-vilom and Bhramri).

Aims & Objectives: To study the effect of combined Indian yoga and aerobic training or tai chi (Chinese aerobics)versus aerobic training or specific Indian yoga among prehypertensive patients.

Patients / Materials & Methods: Randomized clinical study done in last 3 years duration.2554 patients enrolled in this study who had been diagnosed previously as prehypertension (SBP 128+/-7 mmHg and DBP 85+/-4 mmHg) and obesity (BMI 31+/-5). In group 1 aerobic exercise (n=725) and in group 2 Indian specific yoga (n=840) and in group 3 Indian specific yoga plus aerobic exercise (n=989). We arrangedthree sessions of yoga and aerobic exercise each of 16 weeks duration for 30 min daily.

Results: We foundalmost similar results in group 1 and group 2 as per reduction of blood pressure(SBP 6 to 8 mmhg and DBP3 to 5 mmhg), body mass index (BMI) reduction4+/-2. 1 and improved lipid profile(p<0.005). In group 3 there was around blood pressure reduction10 to 14 mmhg, body mass index7 to 9 reduction and two times cholesterol reduction as compared to individual groups(p<0.004). There was also a significant improvement of left ventriclediastolic function, improved 6 min walk or exercise capacity (p<0.015) was seen in group 3 as compared to group 1 and 2.

Discussion & Conclusion: Combined integrated Indian yoga and Chinese aerobic training give better reduction ofblood pressure, lipid profile and weight in obese prehypertensivepatients as compare to individual life style intervention.

Abstract Topic: Comorbidities

Abstract ID: ORAL-243

Abstract Title: To Asses the Reduction in HBA1C with Standardized Fenugreek Seeds Extract in Patients with Type-2 Diabetes: An Add-on Study

Presenting Author: Abhinav Verma* and NarsinghVerma[1]

Affiliations: *Hind Institute of medical sciences, Barabanki, UP, India, [1]King George's Medical university, Lucknow, UP, India

Background: Clinical evaluation Fenugreek seed extract demonstrated the broad spectrum safety and efficacy in type 2 diabetes subjects in our earlier studies

Aims & Objectives: To Asses the Reduction in HbA1C with Fenugreek seed extract in the management of Type 2 Diabetes.

Patients / Materials & Methods: Open label, two armed, single-centric study to evaluated the Reduction in HbA1C with Fenugreek seed extract (daily dosage: 500 mg BD) in 104 male and female subjects (male: 53; female: 51; age: 25-60 years) with Type 2 Diabetes over a period of 3 months. This study evaluated the efficacy of Fenugreek seed extract on FBS and PPBS and HbA1C levels.

Results: The mean HbA1c levels decreased significantly ($p = 0.0001^{**}$) in Fenugreek seeds extract treated group from baseline levels of 9.37% to 6. 11% on completion of the treatment and these levels also decreased significantly ($p = 0.0001^{**}$) in on-going anti-diabetic therapy-treated group from baseline levels of 9.78% to 7. 65% on completion of the treatment. In Fenugreek seed extract treated group, the mean fasting glucose levels significantly ($p = 0.0001^{**}$) decreased from baseline value of 159.97 mg/dl to98.76 mg/dl on completion of the treatment. Where as in on-going anti- diabetic therapy, treated group these levels were significantly ($p = 0.023^{*}$) increased from baseline levels of 147. 12 mg/dl to 173.76 g/dl on completion of the treatment. In Fenugreek seed extract-treated group, 88. 10% study population showed decrease in PP glucose levels on completion of the treatment. In on-going anti-diabetic therapy-treated group, 47.40% study population showed increase in PP sugar levels on completion of the treatment.

Discussion & Conclusion: Fenugreek seed extract was efficacious in ameliorating the symptoms of Type 2 Diabetes without any increase in drug related side**.**

Abstract Topic:

Abstract ID: ORAL

Abstract Title: Effect of Essential Fatty Acid Blend on Circadian Variations of Ambulatory Blood Pressure in Patients with Essential Hypertension and Coronary Artery Disease Risk Markers

Abstract Topic:

Abstract ID: ORAL

Abstract Title: Circadian Variability and Circadian Hyper Amplitude Tension of Blood Pressure and Heart Rate as An Early Predictive Marker of Chemotheraphy Induced Cardiotoxicity

Affiliations: Department of Physiology, King George Medical University, Lucknow, UP, India

Poster APCH

Abstract Topic: Prevention

Abstract ID: EPOSTER-121

Abstract Title: Assessment of Left Ventricular Geometry in Pre-hypertensives Subjects.

PresentingAuthor: Deepak Kumar Das

Company Name: SRMS INSTITUTE OF MEDICAL SCIENCES

Authors And Affiliations: Deepak Kumar Das: SRMS Institute Of Medical Sciences, Bareilly, UP, India|Smita Gupta: SRMS Institute Of Medical Sciences, Bareilly, UP, India|Bindu Garg: SRMS Institute Of Medical Sciences, Bareilly, UP, India|Deep Pant: SRMS Institute Of Medical Sciences, Bareilly, UP, India.

Background: High blood pressure is a strong risk factor for cardiovascular disease. JNC identified a new category of blood pressure in adults termed pre-hypertension. Awareness of prevalence, determinants and prognosis of asymptomatic untreated prehypertension in is still lacking in India. Keeping BP below 120/80 mm Hg may provide important health benefits later in life. But in practice, sub – optimal BP levels that remain below 140/90 mm of Hg are often ignored. Even the prehypertensives show abnormal LV structure which is reversible if appropriate measures should be instituted timely.

Aims & Objectives: Assessment of Left Ventricular Geometry in Prehypertensive Subjects.

Patients / Materials & Methods: Total 201 subjects were selected from general population with the age between 18-70 years. Blood pressure was measured and prehypertension was classified according to JNC 7. 101 subjects were found to be prehypertensives and 100 were normotensives. 2D echocardiography was performed by standard methods.

Results: BMI and BSA were elevated in prehypertensives. 68.51% (37/54) male prehypertensives were found to be having Normal geometry, while altered geometrical patterns were noted in; CH (12.96%), CR (12.96%), EH (5.55%). Normal geometry was noted in 36.17% (17/47) prehypertensive females, and in others CH (2.12%), CR (59.57%) and EH (2.12%).In normotensive male, 67.34% (33/49) had a normal geometry and 32.65% (16/49) of the subjects shows CR. 68.62% (35/51) normotensive females have the normal geometry while rest 31.37% (16/51) has CR.

Discussion & Conclusion: Such findings carry prognostic implication. Early diagnosis of prehypertension will help to take preventive measures to reduce cardiac morbidity and mortality in later period.

Abstract Topic: Hypertension in Elderly Patients

Abstract ID: EPOSTER-128

Abstract Title: Holistic Approach of 'Om' Chanting In Management of Hypertension – A Lifestyle Disorder

PresentingAuthor: Vishnu Prasaath S

Company Name: ESIC Medical College, Chennai, TN, India

Authors And Affiliations: Vishnu Prasaath S, ESIC Medical College, Chennai, TN, India|Vijayalakshmi B: Saveetha Medical College, Chennai, TN, India

Background: One of the most common health issues in today's world is Hypertension. Such patients can be treated better by a stress-reduction technique such as meditation with or without medication. A novel, inexpensive, and holistic intervention that prevent cardiovascular disease is of interest. According to Upanishads, the Mantra 'Om' is the symbol of God. Chanting is a process of repeating mantras that rejuvenate, purify, and transform every aspect of life, encompassing mental, emotional, spiritual, and physical body through unique vibratory sounds.

Aims & Objectives: Our study aimed to find influence of 'Om' chanting on blood pressure and pulse rate in uncomplicated hypertension participants.

Patients / Materials & Methods: After obtaining written, voluntary, informed consent, a total of 40 hypertensive patients (male and female) with documented hypertension who were already on medications were included in the study. Blood pressure values greater than 150/100 mmHg were selected for participation. After selecting the participants, baseline values were recorded, and they were randomly assigned into two groups: the control and experimental groups. Participants in the experimental group chanted 'Om' for 10 minutes once a day at 8: 00 a.m. for two months after receiving instructions through Yoga training. A digital Sphygmomanometer was used to collect the data.

Results: The data was analyzed using a paired 't' test. Results show that the systolic pressure, diastolic pressure, and pulse rate decreased significantly after two months of chanting 'Om' for 10 minutes.

Discussion & Conclusion: Management of hypertension through drugs alone may not be the most effective approach. This low cost and holistic intervention of 'Om' chanting may be considered as a supportive therapy in conjunction with drugs for individuals interested in such lifestyle modifications.

Abstract Topic: Hypertension in Women

Abstract ID: EPOSTER-130

Abstract Title: Imbalance in Oxidative Stress Biomarkers, and Angiogenic Growth Mediators are Associated with Calcium And Magnesium Deficiency among Women Who Develop Preeclampsia: A Case-Control Study in a Ghanaian Population

Author: Enoch Odame Anto, David Coall, Wei Wang

Affiliations:

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Wei Wang: Edith Cowan University, School of Medical and Health Sciences, Perth, Australia

Background: The aetiology of preeclampsia (PE) even though unclear, has been linked to poor placentation, imbalance angiogenic growth mediators (AGMs) and increased oxidative stress (OS). Micronutrients, such as calcium (Ca) and magnesium (Mg) are recognized to reduce PE development via endothelial cell control resulting in a balance OS and AGM profile. However, in the Ghanaian clinical setting, these micronutrients are not routinely measured, and their link with OS biomarkers and AGMs is yet to be explored. Hence, the need for this study.

Aims & Objectives: We evaluated the association between OS biomarkers, AGMs and micronutrients such as Ca and Mg among women with PE and compared it to normotensive pregnant women (NTN-PW).

Patients / Materials & Methods: In this case-control study conducted at the Obstetrics and Gynaecology Department of the Komfo Anokye Teaching Hospital (KATH), Kumasi Ghana, 197 pregnant women clinically diagnosed PE who were purposively recruited as cases and 301 NTN-PW as controls. Samples were collected and estimated for Ca, Mg, soluble fms-like tyrosine kinase-1 (sFlt-1), placental growth factor (PIGF), vascular endothelial growth factor-A (VEGF-A), soluble endoglin (sEng), 8-hydroxydeoxyguanosine (8-OHdG), 8-epiprostaglandinF2-alpha (8- epi-PGF2α) and total antioxidant capacity (TAC).

Results: Among the PE women, Ca and Mg correlated negatively with sFlt-1, 8epiPGF2α, 8-OHdG, sFlt-1/PIGF ratio, 8-epi-PGF2α/PIGF ratio, 8-OHdG/PlGF ratio and sEng/PIGF ratio but positively with VEGF-A, PIGF and TAC ($p < 0.05$). Preeclamptic women had higher proportions of calcium deficiency (78.2% vs 14.2%; $p<0.0001$) and magnesium deficiency (72.1% vs 6.3%) compared to NTN-PW.

Discussion & Conclusion: Magnesium and calcium deficiencies are associated imbalance in AGMs and OS biomarkers among PE women. Routine measurement of these micronutrients would allow the monitoring of poor placental angiogenesis while enabling an understanding of the triggers of increased OS in PE.

Abstract Topic: Hypertension in Elderly Patients

Abstract ID: EPOSTER-142

Abstract Title: Patterns of Clinical Management Among Patients With Diabetes and Hypertension in >65 Years of Age in India: A Retrospective Electronic Medical Record-based Study

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Background: The practices and trends of pharmacological management in patients with hypertension vary in different regions based on the factors like demography, associated comorbidities, and risk factors.

Aims & Objectives: To evaluate the patterns of pharmacological management of hypertension in Indian patients who are >65 years of age with diabetes as a comorbidity.

Patients / Materials & Methods: This real-world retrospective study was based on electronic record data collected from June 2017 to June 2019 from 150 cities across India. Inclusion criteria were patients with age ≥65 years diagnosed with hypertension (≥140/90 mmHg) and diabetes with the availability of 6-12 months of follow up post enrolment. Those with secondary or malignant hypertension were excluded from the analysis. Patient were stratified based on the grade of hypertension (ESC/ESH 2018).

Results: In the 7925 diabetic patients over 65 years of age, grade 1, 2 and 3 was seen in 3511 (44.3%), 3182 (40.2%), and 1232 (15.5%), respectively. AHD monotherapy is less common in elderly diabetics with only 28.3% on monotherapy. More than 3 AHDs were used in 23.0% of patients with grade 3 hypertension versus 10.7% with grade 1. Among patients on monotherapy the most prescribed AHD was ARBs (49%). The most prescribed ARB, diuretics, CCBs, beta-blockers, and ACE-I among all patients on monotherapy were

telmisartan (63%), torasemide (56%), cilnidipine (41%), metoprolol (58%), and ramipril (62%), respectively. Most prescribed FDC in grade 1 hypertensives was Hydrochlorothiazide + Telmisartan (10.9%). Amlodipine + Telmisartan was most prescribed in grade 2 (16.2%) and 3 (21.7%).

Discussion & Conclusion: Combination therapy of AHDs is frequently used in elderly diabetic patients with hypertension and the most used drugs are the ARBs. Grade 1 and 2 hypertension was more common in diabetic patients. Most preferred AHDs as monotherapy was ARBs and ARBs in combination with a CCB or a diuretic was most preferred FDC. These findings are in accordance with guideline recommendations.

Abstract Topic: Hypertension in Elderly Patients

Abstract ID: EPOSTER-145

Abstract Title: "Poor Health but No Long-Term Illness". The Perception Discordance Among Low-Income Hypertensives In Malaysia: Respond Study.

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Background: NHMS, 2019 reported that the overall prevalence of hypertension in adults in Malaysia is 30%. The report also found that 1: 5 of Malaysians rated their health as 'not good' over the last two weeks.

Aims & Objectives: The aim to identify patient's perception of their health in relations to their chronic disease illnesses among hypertensive adults.

Patients / Materials & Methods: Data for this analysis was obtained from the Responsive and Equitable Health Systems-Partnership on Non-Communicable Diseases (RESPOND). The study looked at adults with hypertension among the low income B40 category (< RM3, 855, 2014). The communities were selected from rural and urban in four peninsular states (Selangor, Kelantan, Perak and Johor). Following a multistage sampling approach, communities in each stratum were selected according to probability proportional to size and identified based on national census data by community and administrative registers. The households were randomly selected using randomizer.org. Eligible individuals were those aged between 35 – 70 years old, self-reported or identified as hypertensive at screening. Informed consent was taken. A survey using validated questionnaires were conducted. Data analysis was conducted using SPSS version 27.

Results: The total participant was 611. For the perception of health, 65.6% rated their health as poor and 34.4% identified as 'not poor'. Most participants were between 50-59 years-old (33.9). There were more females (73.5%) than males (26.5%). As for co-morbidities, 36.7% has Diabetes Mellitus and a few has stroke (6.2%), asthma (5.1%) and IHD (4.7%). Interestingly, despite this population has hypertension and other co-morbidities, 94.3% believed that they do not suffer from long term illness (p-value 0.029)

Discussion & Conclusion: Comparable to the NHMS report, most participants perceived poor health and yet, do not view their hypertension or other co-morbidities as long-term illness. There is a need to address this perception discordance because it may affect their disease control and self-management.

Abstract Topic: Prevention

Abstract ID: EPOSTER-147

Abstract Title: The Source of Information For Hypertension Among Hypertensive Patients In Low-Income Individuals (B40) In Malaysia

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Background: In Malaysia, four in ten adults aged ≥ 30 years have hypertension. Information about hypertension needs to be delivered clearly.

Aims & Objectives: This study aims to determine the different sources of information regarding hypertension received and its associated

factors among low-income individuals (B40 group) in Malaysia.

Patients / Materials & Methods: The RESPOND study looked at adults with hypertension among the low income B40 category (< RM3, 855, 2014). The communities were selected from rural and urban in four peninsular states (Selangor, Kelantan, Perak and Johor). Following a multistage sampling approach, communities in each stratum were selected according to probability proportional to size and identified based on national census data by community and administrative registers. The households were randomly selected using randomizer.org. Eligible individuals were those aged between 35 – 70 years old, self-reported or identified as hypertensive at screening. Informed consent was taken. A survey using validated questionnaires were conducted. Data analysis was conducted using SPSS version 27.

Results: There were 611 respondents involved in this study. The percentage of the respondents who received information about hypertension was 68.2%. There was a significant difference in the type of cases (old and new) (p<0.001), age groups (p=0.009) and how much respondents know about hypertension (p<0.001). Almost 75% of the respondents received the information from the medical personnel. The other source of information were family (24.9%) and friends (20.4%). Old cases of hypertension received significantly higher information from the medical personnel. New cases of hypertension received significantly higher from family member (p=0.033), friend (p=0.047), television (p<0.001), print media (p=0.044), internet (p=0.012) and from radio (p=0.027). Rural respondents utilized higher on television compared to urban respondents (p=0.009) and females received the information from medical personnel compared to males (p=0.007). Those with age less than 59 and higher educational status utilized the internet to receive the information (p=0.002 and p=0.004, respectively).

Discussion & Conclusion: The percentages of the respondents who received information about hypertension was low. Medical personnel need to be more knowledgeable to deliver the information mostly to the new cases of hypertensive individuals.

Abstract Topic: Pharmacological Management

Abstract ID: EPOSTER-149

Abstract Title: Patterns of Clinical Management Among Patients With Dyslipidemia and Hypertension In 18-40 Years of Age in India: A Retrospective Electronic Medical Record-based Study

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Background: The practices and trends of pharmacological management in patients with hypertension vary in different regions based on the factors like demography and comorbidities.

Aims & Objectives: Evaluate the patterns of pharmacological management in 18-45 years of age patients having hypertension with dyslipidaemia across India.

Patients / Materials & Methods: This real-world retrospective study was based on EMR data collected from June 2017 to June 2019 from 150 cities across India. Inclusion criteria were 18-40 years old patients diagnosed with hypertension (≥140/90 mmHg) and dyslipidaemia. Those with secondary or malignant hypertension were excluded from the analysis. Patients were stratified based on the grade of hypertension (ESC/ESH 2018).

Results: In the 1589 dyslipidaemia patients between 18-40 years of age, grade 1, 2 and 3 hypertension was seen in 40.7%, 42.4% and 16.9%. AHD monotherapy was most preferred in grade 1 (38.9%), whereas combination therapy was preferred in 70.3% grade 2 and 81.4% grade 3 hypertension. More than 3 AHDs were used in 18.6% patients with grade 3 hypertension as against only 8.2% grade 1 patients.

The most preferred AHDs either used as monotherapy or in combination were the ARBs which were used in 57.2% patients, followed by CCBs (24.9%), BBs (20.0%), diuretics (10.3%), and ACE-Is (1.1%).

The most frequently used ARB, diuretic, CCBs, BBs and ACE-Is were Telmisartan (34.5%), Chlorthalidone (5.6%), Amlodipine (12.7%), Metoprolol (11.9%), and Ramipril (5%), respectively.

Most commonly prescribed anti-hypertensive FDC in grade 1, 2 was Chlorthalidone + Telmisartan (6% and 11.5% respectively) and in grade 3 was Amlodipine + Telmisartan (23.4%).

Discussion & Conclusion: Combination therapy for antihypertensive drugs is frequently use in young patients having dyslipidemia with hypertension and the most used drugs are the ARBs

Abstract Topic: Epidemiology

Abstract ID: EPOSTER-151

Abstract Title: Treatment Seeking Dynamics and Access to Health Care Among B40 Hypertensive Patients in Malaysia: Urban Rural Perspective

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Background: Global evidences showed health equity disparities between localities in chronic health conditions particularly hypertension. Urban road network amenities has positive influence on the spatial distribution of health service facilities.

Aims & Objectives: The aim of this research is to identify treatment seeking dynamics and access to health care among B40 Hypertensive patients in Malaysia comparing urban rural localities.

Patients / Materials & Methods: Data acquired from the Responsive and Equitable Health Systems-Partnership on Non-Communicable Diseases (RESPOND) research on hypertensive adults among the low-income B40 category of < RM 3, 855 (2014). A multistage sampling approach, whereby purposive sampling of four peninsular states, Selangor, Kelantan, Perak, and Johor; random stratum and household selection from rural and urban using proportional to national census and probability sampling of the participants.

Results: Total participants were 611, with mean age of 58.87 (±7.92SD) years old. There were homogenous characteristics of mean age, gender, marital status, level of education and employment between urban and rural.

There was no difference between urban (85.5%: 99.0%) and rural (86.1%: 98.0%) of household members diagnosed: self-reported hypertension. The mean blood pressure were similar (urban: 147.53±24.3/90.51±14.8mmHg vs rural: 147.28±21.1/89.85±13.7mmHg); mostly were non-smokers (urban: 83.0% vs rural: 84.1%); rate their own health as good (urban: 65.3% vs rural: 66.0%); with <40% has type 2 diabetes, <7% has stroke, <6% has heart attack and <2% has heart failure (all p > 0.05).

Pre-diagnosis, the main reason for visit during first diagnosed was worry of blood pressure (urban: 48.1% vs rural: 45.5%); majority seek health personnel because of convenient/nearby (urban: 52.3% vs rural: 58.4%); main facilities chosen were government (urban: 40.9% vs rural: 29.1%); health clinics (urban: 69.8% vs rural: 67.0%); most didn't receive any information on high blood pressure before the diagnosis was made (urban: 56.5% vs rural: 62.4%); mainly pre-diagnosis were informed by general practitioners (urban: 15.8% vs rural: 14.0%) and were advised for diet changed, weight reduction and increased physical activity (all p > 0.05).

Upon diagnosis majority had modern medicines prescribed (urban: 86.5% vs rural: 91.4%);highest used was CCBs (urban: 37.4% vs rural: 38.4%) followed by ACE(-) (urban: 16.8% vs rural: 16.1%) and beta blockers (urban: 8.9% vs rural: 10.7%); sources of medications were from clinic/ health centre (urban: 86.8% vs rural: 77.1%); majority adhere to medications past 12 months (urban: 98.7% vs rural: 99.1%); and mostly was not advised for traditional medicines (urban: 92.7% vs rural: 96.1%)(all p > 0.05).

Discussion & Conclusion: This study shows there was homogenous sociodemographic, health characteristics and most importantly health equity across localities among lower-income group with hypertension in Malaysia. This highlight the stakeholders engagement outreached efforts are equal across localities to improve health services related to hypertensive control.

Abstract Topic: Pharmacological Management

Abstract ID: EPOSTER-152

Abstract Title: Retrospective Study To Assess Effect of Telmisartan on Urine Albumin-to-Creatinine Ratio (Uacr) in Indian Patients with Hypertensive and Diabetes

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Background: Long-term uncontrolled hypertension increases the intra-glomerular pressure leading to proteinuria. Angiotensin receptor blockers reduce protein excretion greater than other antihypertensive agents.

Aims & Objectives: To assess the impact of Telmisartan on urine albumin-to-creatinine ratio (UACR) and blood pressure (BP) among Indian patients with hypertension and diabetes on telmisartan monotherapy.

Patients / Materials & Methods: This was a retrospective cohort study. Hypertensive patients prescribed with Telmisartan monotherapy with UACR records of at least two analyzable visits were

enrolled in the study. Study was approved by an independent ethics committee. In this sub analysis, the data of patients with hypertension and diabetes was analyzed retrospectively to assess the change in UACR and BP from visit 1 to visit 2.

Results: A total of 1095 patients were enrolled. The average age was 54.0 ± 11.7 years. Data of 945 patients with hypertension and diabetes was available for sub analysis. There was a significant reduction in UACR from 83.3 ± 312.4 mg/g at visit 1 to 58.27 ± 231.47 mg/g at visit 2 (p value 0.0055) with Telmisartan monotherapy in patients with hypertension and diabetes (Mean Duration 292 days between visit 1 and 2). In patients with UACR between 30 to 300mg/g (n=244), the UACR decreased from 102.1 at visit 1 to 63.1 at visit 2 (p <0.001). In those with UACR >300mg/g (n=49), the UACR decreased from 967.7 at visit 1 to 636.5 at visit 2 (p =0.0518). Reduction in systolic and diastolic BP was -8.7 and -3.8 mm of Hg respectively (both p <0.001, mean duration of 101.5 days). The mean HbA1c decreased from 8% at visit 1 to 7.64% at visit 2 (p=0.0019).

Discussion & Conclusion: The present study demonstrated that telmisartan monotherapy can prevent the progression of microalbuminuria along with a significant reduction in BP in patients with hypertension and diabetes.

Abstract Topic: Hypertension in Young

Abstract ID: EPOSTER-153

Abstract Title: Prevalence of Blood Pressure and Associated Metabolic Syndrome Risk Factors Among Indian Adolescents

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Background: In India, only a few studies have been undertaken to investigate the prevalence of blood pressure and associated Metabolic Syndrome (MetS) risk factors among adolescents. Most of the studies carried out on the adult population.

Aims & Objectives: The present cross-sectional study was aimed to find out the prevalence of blood pressure and investigate the association of blood pressure with associated MetS risk factors among urban and rural Indian adolescents.

Patients / Materials & Methods: This study was carried out among 853 (406 boys and 447 girls) adolescents, aged 13 to 18 years from 12 high schools & 9 Madrasah situated in rural and urban areas in West Bengal, India. Anthropometric measurements, such as stature, body weight, circumferences at minimum waist (MWC) and maximum hip (MHC) and four major skinfolds were measured using standard methodology. Body Mass Index (BMI) and Waist-Hip Ratio (WHR) were calculated using standard formula. Systolic (SBP) and Diastolic (DBP) blood pressure were recorded according to a proper methodology. The weekly consumption of food was collected using a food frequency schedule.

Results: The urban participants have higher mean values of BMI and WHR, but significantly, mean values of SBP & DBP are almost similar among rural and urban participants. No significant sex difference is observed for SBP and DBP.

Among the total study participants 16.52% were overweight and 7.97% were obese. The prevalence of pre-hypertension and hypertension was 13.7% and 7.2% among studied adolescents. Prevalence of hypertension increases with age and it was statistically significant. A significant correlation was observed between BMI and Blood pressure. The family history of hypertension, physical inactivity and faulty food habits was found to be significant association with blood pressure among the participants.

Discussion & Conclusion: Since hypertension starts mid and late adult age in life, prevention should begin during early ages in life. We need an effective preventive strategy and health awareness programs at local & national level, targeting the adolescents to encourage and improve their unhealthy life style.

Abstract Topic: Complications

Abstract ID: EPOSTER-170

Abstract Title: Pheochromocytoma With An Unusual Manifestation of St-Elevation Acute Coronary Syndrome

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Background: Pheochromocytoma can have a varied presentation with symptoms, often mimicking other diseases. Cardiac manifestations of pheochromocytoma generally include congestive heart failure2, different types of arrhythmia, cardiomyopathy as well as unusually acute coronary syndrome. Herein, we present a case of acute coronary syndrome where pheochromocytoma was suspected because of paroxysmal fluctuation in blood pressure, in the setting of coronary angiography (CAG) being normal.

Aims & Objectives: To present an unusual manifestation of pheochromocytoma in the form of acute coronary syndrome

Patients / Materials & Methods: The patient was 56 year old woman, a known case of diabetes mellitus for 5 years. She was admitted to the hospital with chest pain, dizziness and vomiting. She was conscious, oriented with a pulse rate of 76 per minute and blood pressure of 180/100 mm of Hg. ECG showed ST segment elevation in inferior leads. Cardiac biomarkers were elevated with a troponin-I value of 9.5 ng/ml (normal range below 0.05 ng/ml) and CK-MB value of 86 IU/L (normal range 5 to 25 IU/L). Echocardiogram showed concentric LVH (Left ventricular hypertrophy) and hypokinesia of the inferior wall. Thus patient was taken as a case of acute inferior wall MI (Myocardial infarction) and subjected to coronary angiography which showed normal coronaries. During hospital stay patient developed hypotension (BP= 90/60 mmHg) and was started on vasopressor support. Because of paroxysmal fluctuation of BP and CAG showing normal coronaries, pheochromocytoma was suspected and urinary metanephrines were advised.

Results: The 24-hour urinary metanephrine levels were 2.74 mg/day (normal range below 0.8 mg/day). Subsequently CECT abdomen

was done which showed presence of 4.5, 4.5, 4.0 cm heterogenous left adrenal mass suggestive of pheochromocytoma. Patient was stabilized and discharged on dual antiplatelets, statin, nitrates and phenoxybenzamine. After 2 weeks, beta-blocker was added and patient was referred for adrenalectomy.

Discussion & Conclusion: Pheochromocytoma are rare endocrine tumors arising from chromaffin cells of sympathetic nervous system. The surge of catecholamines in pheochromocytoma can present rarely as acute ST elevation myocardial infarction (STEMI) in the absence of atherosclerotic coronary artery disease. In these patients of acute coronary syndrome, the use of beta blockers as treatment strategy of ACS, can lead to paradoxical rise in BP because of unopposed alpha adrenergic receptor stimulation, thus further aggravating the condition of the patient.

This case illustrates an uncommon manifestation of pheochromocytoma presenting as acute ST-elevation myocardial infarction (STEMI). A high index of suspicion is important for avoiding serious crisis, as in our patient paradoxical fluctuation of blood pressure was there, in the background of raised cardiac biomarkers and normal coronary angiography.

Abstract Topic: Others

Abstract ID: EPOSTER-173

Abstract Title: Isolated Ambulatory Hypertension in a 45-Year-Old Lady: A Case Study

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Background: 24-hour ambulatory blood pressure (BP) is a stronger predictor of cardiovascular morbidity and mortality than conventional office BP. We present a case of 45-year-old female suffering from isolated ambulatory hypertension which was diagnosed after assessing all the possible diagnoses associated with the symptoms with the help of 24 h-ambulatory blood pressure findings.

Aims & Objectives: The aim and objectives were to assess the patient for the symptoms and provide appropriate diagnosis after ruling out the differential diagnosis.

Patients / Materials & Methods: All the findings related to the case were recorded and assessed which included office BP, home BP, hematological, glycemic, lipid, thyroid, ECG & ECHO findings. 24-h ambulatory BP was advised after these findings were in normal range.

Results: 24-h ambulatory BP showed fluctuations in which the patient's BP was found to be abnormal 13 times during the time span of 24 hours.

Discussion & Conclusion: Discussion

Isolated ambulatory hypertension is a condition in which ambulatory BP is elevated, but office and home BP is reported to be normal. It is necessary to assess other conditions such as diabetes, thyroid problems, heart diseases, psychiatric disorders, and menopausal history (in females). In the present study, all these were ruled out after clinical and laboratory assessment. The patient 24-hour ambulatory BP recordings were noted, and it was found that the BP of the patient was at its peak at midnight, which was 173/95 mm Hg. In 24 hours, 13 BP recordings were higher than the normal range. Based upon these findings, the patient was diagnosed with Isolated ambulatory hypertension. The patient was given antihypertensives, and on follow-up after two weeks, the patient got relief from the symptoms of uneasiness and discomfort.

Conclusion: With the help of Ambulatory BP measurement, organ damage can be protected timely, and its incorporation in clinical practice is the need of the hour.

Abstract Topic: Hypertension in Young

Abstract ID: EPOSTER-178

Abstract Title: Characterization of Young Hypertensive Patients Aged Between 18-40 Years

PresentingAuthor: Kelvin Orare*, Ahmed Sokwala

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Background: Hypertension is the world's most significant risk factor for morbidity and mortality. Sub-Saharan Africa has the highest prevalence of hypertension worldwide according to a systematic review done recently. In Kenya, the estimated overall prevalence of hypertension is at 24.5%. Young adult hypertensive patients have a lower proportion of controlled blood pressure compared older adults. Uncontrolled hypertension, irrespective of age, increases cardiovascular risk. This group of patients is under-represented in trials globally and especially locally

Aims & Objectives:

Primary Objective

a) To determine the demographic, clinical and biochemical characteristics of young patients with hypertension aged between 18-40 years at a private tertiary facility in Nairobi, Kenya.

Secondary Objective:

a) To determine the association

Patients / Materials & Methods: Patients aged between 18 and 40 years were identified from the medical records department based on the ICD-10 codes for hypertension; and using their hospital identification numbers, files were sorted and analyzed including laboratory data on the hospital information management system to obtain all the data variables. Demographic and clinical characteristics were summarized using descriptive statistics which include frequencies, percentages, medians and interquartile ranges.

Results: 401 cases of hypertension were analyzed. The median age at diagnosis was 33.0 years, males were 49.1% and females were 50.9%. Those with a history of alcohol consumption and smoking were 42.4% and 8.2% respectively. Only 19.8% patients were diagnosed

with diabetes based on HBA1c levels. Echocardiography was done on 21.4% of the patients, 7.2% had features of LVH and the average left ventricular ejection fraction was 62.0%. The most common medication prescribed was calcium channel blockers at 57.6%. The most common adverse outcome was chronic kidney disease at 6.0%, followed by stroke, coronary artery disease and heart failure at 1.8%, 1.3% and 0.8% respectively.

Discussion & Conclusion: There exist heterogeneous characteristics among both demographic and clinical characteristics among young hypertensive patients with hypertension. Most are overweight and obese. Alcohol consumption is high among this population. Patients with adverse outcomes had abnormal ECG and impaired kidney function.

Abstract Topic: Basic Research

Abstract ID: EPOSTER-180

Abstract Title: Immediate Effect of Guided Meditation on Heart Rate Variability

PresentingAuthor: Tejas Thakorbhai Prajapati*, Bhalendu Vaishnav, Smruti Vaishnav, Hasmukh Shah

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Background: Physiological and Psychological stress disrupts autonomic balance and prolonged autonomic imbalance is associated with a wide range of somatic and mental diseases. Autonomic imbalance is measured by heart rate variability. Guided meditation is has been accepted as one of the effective methods to enhance psychological wellbeing, however, there are seldom any studies which document its physiological effects on heart rate variability (HRV).

Aims & Objectives: The present study was undertaken to evaluate immediate effect of guided meditation on heart rate variability.

Patients / Materials & Methods: Thirty employees of medical college centre who fulfilled inclusion and exclusion criteria were enrolled in the study which was pre-approved by Institutional Ethics Committee (IEC). Short term HRV recoding was done by RMS Polyrite after following all standard precautions. Short term HRV of all participants were recorded for 5 minutes under basal condition. After that participants were asked to listen standard flute music for 15 minutes and continuous HRV recording was done. After baseline HRV recording, guided meditation was done for 15 minutes and HRV was recorded during guided meditation also. The script of guided meditation comprised of resolution, breath awareness, and rotation of consciousness, visualization and relaxation. The scrip was delivered through an audio device.

Results: SDNN, RMSSD, NN50, pNN50 were increased after listening music and after guided meditation. Increased in parameters like SDNN, RMSSD, NN50, pNN50 after guided meditation were more as compared to music and it was statistically significant also. LF (n.u.) was reduced after music and guided meditation. Sympathovagal balance (LF/HF ratio) was improved after music and after guided meditation also.

Discussion & Conclusion: Increased in heart rate variability is seen after music and after guided meditation also. Increased HRV and sympathovagal balance after guided meditation is much more significant than music.

Abstract Topic: Hypertension in Women

Abstract ID: EPOSTER-192

Abstract Title: Sacubitril/Valsartan Improves Sexual Function and Fibrosis of the Clitoral and Vaginal Tissues in Female Spontaneously Hypertensive Rats

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Background: Female sexual dysfunction is common in hypertension. The effects of sacubitril/valsartan (SAC/VAL) as a potential therapy for hypertension and heart failure have not been studied in relation to sexual function and genital fibrosis in female spontaneously hypertensive rats (SHRs).

Aims & Objectives: To evaluate the effect of SAC/VAL on sexual function and genital fibrosis in female SHRs

Patients / Materials & Methods: Thirty female SHRs were administered VAL (30 mg/kg/day), SAC/VAL (60 mg/kg/day) or saline. Ten normotensive female Wistar-Kyoto (WKY) rats were included in the control group. We assessed estrous cyclicity and sexual behavior in the female rats. In addition, the morphology of clitoral and vaginal tissues was evaluated by histological analyses. Western blotting and enzyme-linked immunosorbent assays were used to assess the levels of fibrotic markers in vaginal and clitoral tissues. Furthermore, the protein levels of phosphatase and tensin homolog deleted from chromosome 10 (PTEN), phosphoinositide-3-kinase (PI3K) and AKT expression were measured by western blotting.

Results: SAC/VAL treatment improved hypertension-induced sexual dysfunction, exhibited as a prolonged estrus phase, increased receptivity and proceptive events, and decreased aggressive events, compared to those of VAL treatment and control SHRs without treatments. In addition, SAC/VAL-treated SHRs had lower levels of fibrotic markers, estradiol and estrogen receptor α/β than the levels of VAL-treated SHRs or SHRs without treatment. Moreover, SAC/VAL decreased p-PTEN expression and increased p-PI3K and p-AKT expression at the protein level compared to those in VAL treatment alone.

Discussion & Conclusion: SAC/VAL treatment is superior to VAL treatment in attenuating sexual dysfunction and fibrosis of vaginal and clitoral tissues, which may be related to the PTEN/PI3K/AKT pathway.

Abstract Topic: Others

Abstract ID: EPOSTER-196

Abstract Title: Effect of Different Treatment of Hypertensive Patients with Obstructive Sleep Apnea on Blood Pressure: A Network Meta-Analysis

PresentingAuthor: Chengkun Kou*, Xu Zhao, Xin Fan, Qiongying Wang, Jing Yu

Affiliations: Lanzhou University Second Hospital, Lanzhou, China

Background: OSA is one of the common causes of secondary hypertension. The antihypertensive treatment include pharmacotherapy and non-pharmacotherapy. However, the effect of different treatment on blood pressure is still unclear.

Aims & Objectives: To compare the effect of pharmacotherapy and non-pharmacotherapy for obstructive sleep apnea on blood pressure.

Patients / Materials & Methods: We searched PubMed, EMBASE, Web of Science, Cochrane Library database, China Biology Medicine disc (up to June 1, 2021) to identify the studies that met the inclusion criteria. Two reviewers independently screened literature, extracted data, and assessed the risk of bias. R software was used to perform the meta-analysis.

Results: A total of 30 clinical trials involving 3483 patients were included. Angiotensin-Converting Enzyme Inhibitors(ACEI) / Angiotensin receptor blockers(ARB) showed the most significant antihypertensive effects on office systolic blood pressure as compared with placebo (MD=-4.56, 95%CI: -27.53~-1.69). Mineralocorticoid receptor antagonist (MRA) showed the most significant antihypertensive effects on office diastolic blood pressure as compared with placebo (MD=-15.02, 95%CI: -24.35~-5.72). Rankogram also shows the ACEI/ ARB is the best treatment on office systolic blood pressure and MRA is the best treatment on office diastolic blood pressure.

Discussion & Conclusion: For hypertensive patients with obstructive sleep apnea, Renin-angiotensin-aldosterone System inhibitor (RAS-I) may be the optimal antihypertensive treatment.

Abstract Topic: Prevention

Abstract ID: EPOSTER-207

Abstract Title: Prevalence And Determinants of the Metabolic Syndrome In Ulaanbaatar City, Mongolia

PresentingAuthor: Orkhonselenge Davaadamdin*, Uurtsaikh Baatarsuren, Khulan Tuvdendarjaa, Maral Myanganbayar, Myagmartseren Dashtseren, Naranbaatar Dashdorj, Naranjargal Dashdorj

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Myagmartseren Dashtseren: *Mongolian National University of Medical Science, Ulaanbaatar, Mongolia*

Background: The metabolic syndrome (MS) is a collection of chronic disease risk factors including abdominal obesity, dyslipidemia, elevated fasting glucose and high blood pressure.

Aims & Objectives: This study focused on the prevalence of metabolic syndrome determined through a Stepwise Approach to Surveillance (STEPs) survey in Ulaanbaatar city, Mongolia.

Patients / Materials & Methods: A cross-sectional survey with two-stage cluster sampling was carried out following the WHO STEP-wise approach to surveillance. It included demographic and life style questionnaires, anthropometric measurements and biochemical analysis. Of the representative 4, 515 participants from UB city, about 2178 were also randomly selected to provide blood samples.

Results: Among the final sample of 2137 adults, aged over 20 years, 54.5% were female. The metabolic syndrome was defined based on the National Cholestrol Education Program (NCEP), International Diabetes Federation (IDF), and modified version criteria. The prevalence of metabolic syndrome according to NCEP ATPIII criteria was 20.3%, with regard to IDF criteria was 34.2%, and following the modified version was 28.3%, respectively. In our results, males had a significantly higher prevalence of metabolic syndrome than females ($p<0.001$). The total prevalence of abdominal obesity was found to be 54.9% (95% CI 53.5 to 56.2), that of raised triglyceride was 28.9% (95% CI 26.9 to 30.8), elevated fasting plasma glucose 6.7% (95% CI 6.0 to 7.4), and hypertension 49.1% (95% CI 47.7 to 50.7).

Discussion & Conclusion: We conclude that metabolic syndrome exists at worrying rates in the urban Mongolian population. Furthermore, high prevalence of MS risk factors among men have negative impacts on life quality.

Abstract Topic: Nonpharmacological Management

Abstract ID: EPOSTER-213

Abstract Title: Role of Diet, Physical Activity and Lifestyle Factors on Cardiovascular Health In Premenopausal Women and Its Relation to the Onset of Natural Menopause

PresentingAuthor: Rashmi Shrivastava*, Sunita Tiwari, Shweta Malakar

Affiliations: King George's Medical University, Lucknow, UP, India

Background: Premenopausal Cardiovascular health and onset of natural menopause depends on various factors like genetic, environmental, socioeconomic, reproductive, dietary, and lifestyle. The Premenopausal Cardiovascular health and age at menopause is an important risk factor for long-term morbidity and mortality; and hence, the need to identify the modifiable risk factors like diet and lifestyle changes. Early menopause is associated with an increased risk of subsequent cardiovascular disease (CVD).

Aims & Objectives: The main aim of the study is to determine the role of diet, physical activity and lifestyle factors on Cardiovascular health in Premenopausal women and its relation to the onset of natural menopause.

Patients / Materials & Methods: This study consists of the data from various research articles and findings of American Heart Association which has been reviewed and analyzed.

Results: Dietary factors influence age at natural menopause (ANM) by virtue of their effect on serum estradiol levels and antioxidants level. Severe weight loss or vigorous exercise accelerates ANM by lowering the estrogen levels. Smoking and ANM have an inverse consistent relationship such that it accelerates menopause by 1.5-2 years. A higher premenopausal serum total cholesterol level was statistically significantly associated with an earlier age at menopause, as were increases in total serum cholesterol, relative weight, and blood pressure in the premenopausal period. A first CVD event before age 35 years is associated with a doubling of the risk of an early menopause, while a first CVD event occurred after 35 years indicates a normal menopause at around 51 years.

Discussion & Conclusion: Diet, physical activity and lifestyle factors play a very significant role in maintenance of Premenopausal cardiovascular health and the onset of natural menopause but further investigation needs to be done in this area.

Abstract Topic: Complementary Medicine

Abstract ID: EPOSTER-237

Abstract Title: A Study of Knowledge, Attitude and Practice of Hypertension in Patients Attending Medicine out Patient Department

PresentingAuthor: Prerit Joshi

Company Name: ERA University, Lucknow, UP, India

Affiliations: Era's Lucknow Medical College and Hospitals, Lucknow, UP, India

Background: Hypertension (HTN) is one of the primary risk factor for cardiovascular disease, but the management still remains unsatisfactory. Patient's awareness about the disease greatly impacts the control of illness. The objective of this study was to assess the patient's knowledge, attitude and practice about the disease, HTN.

Aims & Objectives: The objective of this study was to assess the patient's knowledge, attitude and practice about the disease, HTN.

Patients / Materials & Methods: A systematic randomized sampling methodology was adopted to recruit all adult patients attending the outpatient clinic. They were interviewed with a suitably designed and validated questionnaire of KAP (Knowledge, Attitude and Practice) having 28 questions.

Results: A total of 1540 patients met the inclusion criteria and were included in the study, but only 1516 questionnaires were found to be complete. More than 66% had a sound knowledge, 59% had good attitude but only 32% were following the practice methods. Applying the chisquare test, we found that knowledge is significantly associated with age ($p<0.05$), education level ($p<0.001$), positive family history of HTN ($p<0.001$) and marital status ($p<0.05$). The attitude of 46.1% patients showed that salt intake can reduce Blood Pressure (BP), 40.9% showed that regular exercise can decrease BP, 62.9% and 65.3% patients attitude showed that regular monitoring and consistent medicine intake can control BP respectively. Practice questionnaire revealed that only 39.3% controlled their salt intake, 42.5% controlled fatty foods and consumed more fruits and vegetables and 46% exercised regularly. Only 52.9% patients took their medicines timely and 48.2% went for scheduled checkups to their physicians.

Discussion & Conclusion: Though the knowledge about HTN among patients was good, attitude was average but practice and compliance to treatment was poor. As we know the lacunae area, we can focus on attitude and practice improvement through continuous health education programs and promotions at patient and community level.

Abstract Topic: Complications

Abstract ID: EPOSTER-238

Abstract Title: Prophylactic Use of Aspirin and Statins to Combat Covid-19 Induced CV Risk: Clinician Perspectives from India

PresentingAuthor: Mahesh Abhyankar

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Background: Since the cardiovascular (CV) consequences of Covid-19 have become evident, their understanding is imperative to limit the future complications in patients recovered from Covid-19.

Aims & Objectives: The survey was carried out to understand the heightened risk of CV disease (CVD) in Indian patients recovered from Covid-19, and the role of aspirin and statins for prophylaxis of CV complications.

Patients / Materials & Methods: A structured web-based objective 10-point questionnaire was administered to 358 clinicians across India and the responses were analysed descriptively.

Results: 80% of the clinicians believed that patients recovering from Covid-19 remain at a high risk of CVD. Clinicians reported diabetes (76.5%), old age (74%), and hypertension (67%) as the most strongly associated risk factors for CV complications in these patients. Clinicians perceived the ASCVD score, h/o symptoms, and ECG as the best modalities for screening, and C- reactive protein, cardiac troponin levels, complete blood count as the key investigations for diagnosing CVD.

Of all the clinicians, 26% advocated the prophylactic use of aspirin and statins for every patient recovering from Covid-19, while ~70% favored

their use in selective high-risk patients. For prophylaxis, the clinicians would prefer aspirin in a low dose (75 mg) and statins in a moderate dose as indicated by 53% and ~61% of clinicians, respectively. 67% of clinicians opined that aspirin and statin prophylaxis should be given for 6-12 weeks, while the remaining one-third thought about continuing it beyond 12 weeks.Clinicians (76%) also agreed that an aspirin-statin fixed dose combination (FDC) can improve the patient compliance.

Discussion & Conclusion: The clinicians believed that Covid-19 is associated with an increased risk of CVD which is further compounded with old age and the presence of comorbidities. Results also underline that prophylactic aspirin and statin combination in patients recovering from Covid-19 may help mitigate this risk.

Abstract Topic: Hypertension in Young

Abstract ID: EPOSTER-239

Abstract Title: The Role of Yogic Practices on Hypertension in Adults

Presenting Author: Diksha Devi

Affiliations:

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Sunita Tiwari: Dept. of Physiology, KGMU, Lucknow, UP, India

Background: Hypertension is a common disorder affecting 15% of adult in India and so much progress has been made to prevent and control this disorder. Hypertension is more prevalent in urban than in rural areas. The reason could be the difference in heredity, smoking, body fat and life style of city dwellers and villagers. By the year 2025, it is estimated that approximately 1 in 3 adults aged over 20 years, or 1.56 billion people worldwide, will have hypertension. Hypertension is a major public health issue that is estimated to affect more than 1 billion people worldwide and account for 13% of deaths, 64 million disability-adjusted life years, and 7 million premature deaths per year.

Aims & Objectives: The main aim of the study is to determine the role of yogic practices on hypertension in adults.

Patients / Materials & Methods: The study consist of the data from various published studies on yoga and HPT was performed revealing 39 cohort studies, 30 non randomized, controlled trials (NRCTs), 48 randomize controlled trials (RCTs), and 3 case reports with durations ranging from 1 wk to 4 y and involving a total of 6693 subjects which has been reviewed and analyzed.

Results: Most studies reported that yoga effectively reduced BP in both normotensive and hypertensive populations. These studies suggest that yoga is an effective adjunct therapy for Hypertension and worthy of inclusion in clinical guidelines, yet the great heterogeneity of yoga practices and the variable quality of the research makes it difficult to recommend.

Discussion & Conclusion: The result revealed that yogic intervention helped in hypertension. Several previous investigators have also observed that Yoga lowers systolic pressure. In the case of stress related hypertension, Yoga might modify the states of anxiety thus reducing hypertension.

YIA APCH Abstracts

Abstract Topic: Prevention

Abstract ID: ORAL-115

Abstract Title: LEFT VENTRICULAR MASS (LVM) ASSESSMENT IN YOUNG PREHYPERTENSIVE SUBJECTS AND ITS CORRELATION WITH OTHER CARDIOVASCULAR RISK FACTOR.

PresentingAuthor: Deepak Kumar Das, Smita Gupta, Deep Chandra Pant, Bindu Garg

Authors And Affiliations: SRMS Institute of Medical Sciences, Bareilly, UP, India

Background: High blood pressure is a strong risk factor for cardiovascular disease. JNC identified a new category of blood pressure in adults termed Prehypertension. Prehypertensive subjects have greater risk of developing hypertension than the normotensive subjects. Awareness of prevalence, determinants and prognosis of asymptomatic untreated prehypertension is still lacking in India. Keeping BP below 120/80 mm Hg provides important health benefits later in life. Each increase of 20 mm Hg of SBP or about 10 mm Hg of DBP was associated with a two-fold increase in the stroke death rate and two-fold increase in death rate due to ischemic heart and other vascular diseases. But in practice, sub optimal BP that remain below 140/90 mm of Hg are often ignored. Even lipid profile and blood sugar level is deranged in prehypertensives which are important determinant of cardiovascular risk factors but is often ignored. But these changes can be reverted back to normal if appropriate measures are instituted timely.

Aims & Objectives: Assessment of LVM in Prehypertensive Subjects and its correlation with other cardiovascular risk factor.

Patients / Materials & Methods: Total 106 subjects were selected from general population with the age between 25-50 years. Blood pressure was measured and prehypertension was classified according to JNC 7. 54 subjects were found to be prehypertensives and 52 were normotensives. 2D echocardiography was performed by standard methods. Blood sample was taken for Lipid profile, blood sugar and glycated hemoglobin (HbA1C) in fasting state. Results were compared using compare using student t test. Correlation between blood pressure and serum lipid profile and blood sugar and also between LVM and lipid profile and Blood sugar was done using person correlation.

Results: BMI shows significant difference in prehypertensives. LVIDs, LVIDd, IVSTd show significant difference in prehypertensives. LVM and LVMI were statistically significant in Prehypertensives. Serum Cholesterol, triglyceride and LDL shows statistically significant difference. Fasting blood sugar and HbA1C shows statistically significant difference in prehypertensives.

In prehypertensives, SBP shows positive correlation with serum Cholesterol, triglyceride, LDL, VLDL and Blood sugar whereas DBP shows positive correlation with serum cholesterol, HDL and LDL. SBP shows negative correlation with serum HDL whereas DBP shows it with serum triglyceride and VLDL. LVM shows positive correlation with blood sugar, serum cholesterol, triglyceride and LDL whereas its negative correlation is with serum VLDL and HDL.

Discussion & Conclusion: Such findings carry prognostic implication. Early diagnosis of changes in prehypertensives will help us to take preventive measures early so as to reduce cardiac morbidity and mortality in later period of life.

Abstract Topic: Epidemiology

Abstract ID: ORAL-131

Abstract Title: 24 hr-Ambulatory Blood Pressure Profile Of Hypertensive Health Care Workers In A Tertiary Hospital

PresentingAuthor: Anna Francesca Sanchez Abarquez*, Angelica Dela Cruz, Elmer Jasper Llanes, Lourdes Ella Santos

Authors And Affiliations: Philippine General Hospital, Manila City, Philippines

Background: Hypertension is a leading cause of cardiovascular morbidity and mortality accounting for 49 % of ischemic heart disease, 69 % of cerebrovascular disease, and 7.1 million deaths per year worldwide. The prevalence of hypertension is increasing most rapidly in developing countries where poor hypertension treatment and control contribute to the growing epidemic of cardiovascular disease (CVD)

Aims & Objectives: To determine the blood pressure profile and phenotypes of hypertensive health care workers and its association to BP control dipping status.

Patients / Materials & Methods: This was a prospective cross-sectional study of health care workers who underwent 24 hour ambulatory blood pressure monitoring (ABPM). Clinical profile was taken, and ABPM data were also evaluated

Results: 181 patients were included with majority from 50-59 years old age group (33.3%), female (70.17%), non-shift workers (61.88%) with the most common comorbidity of obesity (60.22%) and suspected obstructive sleep apnea (60.22%). All the known hypertensives (100%) had uncontrolled blood pressure despite being on antihypertensive medication. The following hypertension phenotypes were identified: Sustained hypertension (64.7%), masked hypertension (13.26%), white coat hypertension (7.18%), and non-dippers (66%).

Discussion & Conclusion: Among health care workers, mean 24-hour, daytime, and nighttime blood pressure were elevated more in females 50-59years old age group, known hypertensives on antihypertensive therapy, with association on working hours>8hrs, without association to shift work, and job classification.This study highlights the importance of 24-hour ABPM to detect 24-hr BP pattern and identify participants with ABPM parameters at high risk

for cardiovascular outcomes and also to determine blood pressure control among known hypertensive patients on maintenance medications. The findings of this study can serve as a "red- flag" signs to physicians and the patients more primarily for physicians to improve on screening, diagnosis and management strategies for hypertension, and check adherence to therapy of our patients.

Abstract Topic: Epidemiology

Abstract ID: ORAL-133

Abstract Title: A Randomized Trial of Secondary Hypertension Screening at A Private Clinic in Karachi, Pakistan

PresentingAuthor: Muhammad Ali Soomo

Authors And Affiliations:

Muhammad Ali Soomo: Pathology, Bilawal Medical College for Boys, LUMHS, Jamshoro, Pakistan

KhalidaSoomro: Cadiology, Pakistan Cardiac Society, Karachi, Pakistan

Background: For underdeveloped countries, hypertension has been identified as a worldwide health concern. Secondary hypertension (SH), which includes endocrine hypertension, is rare and poorly understood in many of these countries.

Aims & Objectives: Nationally representative studies are not available at the moment. As a result, we used screening to determine the prevalence of SH among hypertensive patients at a private clinic. The purpose of the cross-sectional study, which ran from May 2017 to June 2018, was to assess the prevalence of hypertension in the Pakistani population using data from screenings at a private clinic in Karachi.

Patients / Materials & Methods: We suspected 437 (M: 187) and (F: 250) patients of having secondary hypertension from the initial screening of 566 patients and performed tests to determine the cause of hypertension, as well as measuring plasma aldosterone concentration, plasma renin activity, serum cortisol concentration, and plasma catecholamine concentration. We referred individuals for furosemide plus upright test, captopril renography, dexamethasone suppression test, abdominal ultrasonography (US), abdominal CT, and arteriography investigations as a secondary screening.

Results: These tests clearly showed that Secondary Hypertension was present in 8.1 percent of the 437 patients studied. 42 patients were diagnosed with Renal Parenchymal Disease, 25 with Acute Renal Failure, 15 with Calculi, 29 with chronic glomerulonephritis leading to CRF, and 3 with reno vascular hypertension. On arteriography, 2 cases of aortic coarctation were discovered; 1 patient had primary aldosteronism; 5 patients had primary hyperparathyroidism; 6 patients had hyperthyroidism; and 11 patients had hypothyroidism. We were unable to ascertain whether hydronephrosis was the cause of hypertension in seven cases of hydronephrosis (two known and five newly discovered). The prevalence of curable SH was higher among hypertensive people in this screening investigation, which was conducted in the majority of cases with simple testing.

Discussion & Conclusion: Blood pressure screening rates in Pakistan are alarmingly low; the underlying condition in hypertension patients should be addressed appropriately to avoid long-term antihypertensive drug use and the dangers of atherosclerotic consequence. This advocates for the implementation of a nationwide screening programme to promote hypertension identification, awareness, and treatment.

Abstract Topic: Basic Research

Abstract ID: ORAL-134

Abstract Title: Chronobiology At Work: Studying The Effect of Time-restricted Meal Intake on Lipid Profiles of Patients With Type 2 Diabetes

PresentingAuthor: Smriti Rastogi

Authors And Affiliations:

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Background: Vital to the alternating cycle of feeding and fasting (irrespective of circadian rhythm-proficient or circadian rhythm deficient organisms) is the theory that ''fasting physiology''(biochemical processes associated with the process of fasting) is kick started once stored energy is being utilized and therefore, does not occur during the feeding period when more energy is being accumulated. This theory also sheds lights on the concept that certain facets of repair and rejuvenation which form a very important part of the fasting-re-feeding physiology may be associated only with fasting.

Aims & Objectives: Objectives

Effect of time restricted meal intake on lipid profile

Patients / Materials & Methods: 400 diabetics enrolled from OPD, Endocrinology, KGMU were randomly divided based on whether they have consented (TRM(time restricted meal) group) or not (control group).Baselineparameters were recorded and followup was done at 6and 12 months foranthropometric measurement, height, weight, waist hip ratio, aBSI, neck size, blood sugar (Fasting and post prandial), HbA1C and lipid profile. A single intervention was done that the timing of dinner was at or around 7 in the evening for the TRM group.

Results: 65% of TRM group had normal Hba1c and only 40 percent ofnon- TRM group had normal sugar level after 1 year. BMI ($p<0.0030$), Hip size($p<0.0012$), systolic blood pressure($p<0.0211$), HbA1c($p <0.0017$), blood sugar (fasting ($p<0.0167$), and post-prandial $p<0.0001$) changed significantly. Total cholesterol decreased by18 mg/dl (p value 0.3), Triglycerides decreased by 32 mg/dl (p value 0.01), LDL decreased by 21mg/dl (p value 0.03), VLDL decreased by 5.5 mg/dl (p value 0.04), HDL increased by 8 mg/dl (p value 0.20). p value was significant in all parameters of lipid profile.

Discussion & Conclusion: The study needs to be corroborated further, but has shown promising results

Abstract Topic: Epidemiology

Abstract ID: EPOSTER-136

Abstract Title: Habitual Dietary Flavonoid Intake is Associated with Benefits on Central Hemodynamics in Older Adults

PresentingAuthor: Ben Parmenter

Company Name: University of Western Australia

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Background: Hypertension is the most common chronic disease and the leading risk factor for premature death worldwide. Flavonoids, found in foods such as tea, cocoa, nuts, fruits, and vegetables, have demonstrated anti-hypertensive properties, yet, their association with central hemodynamics remains underexplored.

Aims & Objectives: To investigate the association of dietary flavonoid intake with measures of central blood pressure and arterial stiffness.

Patients / Materials & Methods: In a cross-sectional investigation of 381 non-smoking healthy older adults (mean ± SD age, 66.0 ± 4.1 years; 41% male), recruited as part of the Australian Research Council Longevity Intervention (ARCLI) study, habitual dietary flavonoid intake (i.e., flavonols, flavones, flavanones, anthocyanins, flavan-3-ols and total consumption) was estimated from food frequency questionnaires using the US Department of Agriculture food composition databases. Measures of central hemodynamics and arterial stiffness were measured using applanation tonometry of the radial artery and included systolic blood pressure (cSBP), diastolic blood pressure (cDBP), mean arterial pressure (cMAP), and augmentation index (cAIx).

Results: Total flavonoid intake was not associated with any measure of central hemodynamics or arterial stiffness. Of the individual flavonoid subclasses assessed, after adjusting for demographic and lifestyle confounders, each standard deviation (SD)/day higher intake of anthocyanins (SD=44.3 mg/day) was associated with significantly lower cDBP (−1.56 mmHg, 95% CI: −2.65, −0.48) and cMAP (−1.62 mmHg, 95% CI: −2.82, −0.41). Similarly, each SD/day higher intake of flavanones (SD=19.5 mg/day) was associated with ~1% lower cAIx (−0.93%, 95% CI: −1.77, −0.09). These associations remained significant after additional adjustment for dietary quality and other nutrients that may affect blood pressure (i.e., sodium, potassium, calcium, magnesium, omega-3, total protein and fibre).

Discussion & Conclusion: In older adults, a higher habitual intake of anthocyanins, found predominantly in berries, was associated with lower central blood pressure, while, higher consumption of flavanones, found generally within citrus fruits, was associated with lower central arterial stiffness.

Abstract Topic: Pharmacological Management

Abstract ID: EPOSTER-138

Abstract Title: Patterns of Clinical Management Among Patients With Diabetes and Hypertension in 18-40 Years of Age in India: A Retrospective Electronic Medical Record-Based Study

PresentingAuthor: Vidhya Natarajan

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Background: The practices and trends of pharmacological management in patients with hypertension vary in different regions based on the factors like demography and comorbidities.

Aims & Objectives: To evaluate the patterns of pharmacological management of hypertension in Indian patients who are 18-40 years of age and have comorbidity of diabetes.

Patients / Materials & Methods: This real-world retrospective study was based on EMR data collected from June 2017 to June 2019 from 150 cities across India. Inclusion criteria were 18-40 years old patients diagnosed with hypertension (≥140/90 mmHg) and diabetes with the availability of 6-12 months of follow up data. Those with secondary or malignant hypertension were excluded from the analysis. Patients were stratified based on the grade of hypertension (ESC/ESH 2018).

Results: In the 2206 diabetic patients between 18-40 years of age, grade 1, 2 and 3 hypertension was seen in 951 (43.1%), 963 (43.7%), and 292 (13.2%), respectively. AHD monotherapy was most prescribed in grade 1 hypertension (51.9%) and combination therapy was most prescribed in grade 3 (73.2%). Among patients on monotherapy the most prescribed AHD was ARBs (64%). The most frequently used ARB, CCBs, BBs and ACE-Is among all patients on monotherapy were telmisartan (67%), amlodipine (57%), metoprolol (36%), and ramipril (63%), respectively. Diuretic as monotherapy was prescribed in only 4% of patients on monotherapy. Chlorthalidone + Telmisartan was most prescribed FDC in grade 1 (11%) and 2 (18%) hypertensives and Amlodipine + Telmisartan in grade 3 (21.1%).

Discussion & Conclusion: Combination therapy for antihypertensive drugs is frequently use in young diabetic patients with hypertension and the most used drugs are the ARBs. Grade 1 and 2 hypertension was more common in diabetic patients. Most preferred AHDs as monotherapy was ARBs and ARBs in combination with a CCB or a diuretic was most preferred FDC. These findings are in accordance with guideline recommendations.

Abstract Topic: Epidemiology

Abstract ID: EPOSTER-139

Abstract Title: Hypertension And Stroke Burden In Asia-Pacific Countries

PresentingAuthor: Narayanaswamy Venketasubramanian

Affiliations: Raffles Hospital, Singapore

Background: Stroke is a major cause of death and disability globally, especially in the Asia-Pacific region, home to more than 4 billion people. Hypertension is the strongest modifiable risk factor for stroke.

Aims & Objectives: To investigate the association between hypertension and stroke burden in Asia-Pacific countries.

Patients / Materials & Methods: Stroke burden, as defined as age and sex-standardised Disability Adjust Life Years lost (DALYs)/100, 000 due to stroke, in Asia Pacific countries was extracted from the Global Burden of Disease (GBD) Study 2010. The age and sex-standardised prevalence(%) of hypertension, defined as SBP>140mmHg and DBP>90mmHg among adults 18+ years, in these same countries was obtained from the World Health Organisation (WHO) database for 2015. Linear correlation was then performed.

Results: Data was obtained for 26 countries. There was a wide variation in DALYs due to stroke, and were lowest in Australia (398.2/100, 000) and New Zealand (440/100, 000), and highest in Mongolia (4, 409.8/100, 000) and Indonesia (3, 382.2/100, 000). Hypertension prevalence was also variable, and was lowest in South Korea (11.0%) and Singapore (14.6%), and highest in Pakistan (30.5%) and Nepal (29.6%). There was a modest positive correlation between DALYs due to stroke and hypertension prevalence (r=0.49). Approximately a quarter of the variation in the DALYs due to stroke was predictable from the variability in hypertension prevalence across the Asia-Pacific region (r2=0.24).

Discussion & Conclusion: There is wide variability in the burden of stroke and hypertension in the Asia-Pacific region. There is a modest positive correlation between the two, with a significant proportion of the variability in stroke burden being attributable to the variation on hypertension prevalence.

Abstract Topic: Epidemiology

Abstract ID: ORAL-140

Abstract Title: Home Blood Pressure Monitoring : A Cross-Sectional Survey Among Doctors in Singapore

PresentingAuthor: Veerendra Chadachan

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Background: Hypertension is the most common modifiable cardiovascular risk factor, yet control rates are poor. Home BP monitoring (HBPM) can potentially improve control andmajor practice guidelines recommend it.

Aims & Objectives: The objective of this study was to evaluate the perception and utility of HBPM to diagnose and monitor hypertension among the doctors in Singapore and to identify the barriers in implementation of HBPM in clinical practice.

Patients / Materials & Methods: We conducted a survey from July 2020 to June 2021. Three hundred doctors were invited. Using a self-reported questionnaire, we obtained information on demography, specialty of practice, and the perception and utility of HBPM in their practice.

Results: A total of 281 doctors responded, of which 107 (38.1%) were General Practitioners and 142 (50.5%) were Internal Medicine (IM) specialists. Among the IM subspecialists, 92 (64.79%) were internists. 56.6% had a Hospital-based practice and 40.57 % had a clinic-based practice. About 75% of the doctors manage more than 10 hypertensive patients per week. 63.0% responded that HBPM is the most important measure to decide on treatment of patients with hypertension and 98.58% recommend HBPM for patients with hypertension. The participants felt that only 44.2% of their hypertensive patients measure their own BP, and 49.5% own a HBPM device. Only 44.8% of the doctors felt that the significance of HBPM is highly recognized by the physicians. Among those who felt the significance of HBPM is moderately or poorly recognized by physicians, the reasons stated were lack of guidelines (44.6%), lack of understanding of HBPM (39.6%), high cost of device (33.8%) and inertia of physicians (23.0%). Only 25.6% of doctors felt the significance of HBPM is highly recognized by patients in Singapore. Those who felt the significance is moderately or poorly recognized by patients, the possible reasons stated were lack of understanding of HBPM (63.0%), no recommendation to patients by the physicians (42.9%), high cost of the device (47.1%) and low education level (41.3%). Only 45.9% regularly validate the accuracy of HBPM devices by comparing with auscultation.

Discussion & Conclusion: Despite most doctors recommending HBPM for diagnosis and monitoring of hypertensive patients, less than half of the patients have their own HBPM device and measure their own BP at home, and more than half of doctors felt that the significance of HBPM is not highly recognized by physicians and patients. The reasons stated include lack of understanding, lack of guidelines and the high cost of the devices. To improve HBPM implementation in Singapore, further training of doctors and patients and promoting the national hypertension guidelines is necessary.

Abstract Topic: Pharmacological Management

Abstract ID: EPOSTER-141

Abstract Title: Patterns of Clinical Management Among Patients With Dyslipidemia and Hypertension in >65 Years of Age in India: A Retrospective Electronic Medical Record-based Study

PresentingAuthor: Abhishek Tandayam

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Background: The practices and trends of pharmacological management in patients with hypertension vary in different regions based on the factors like demography, associated comorbidities, and risk factors.

Aims & Objectives: To evaluate the patterns of pharmacological management of hypertension in Indian patients who are >65 years of age with comorbidity of dyslipidaemia.

Patients / Materials & Methods: This real-world retrospective study was based on electronic record data collected from June 2017 to June 2019 from 150 cities across India. Inclusion criteria were patients with age ≥65 years diagnosed with hypertension (≥140/90 mmHg) and diabetes with the availability of 6-12 months of follow up post enrolment. Those with secondary or malignant hypertension were excluded from the analysis. Patients were stratified based on the grade of hypertension (ESC/ESH 2018).

Results: In the 8176 dyslipidaemia patients over 65 years of age, grade 1, 2 and 3 hypertension was seen in 3640 (44.5%), 3283 (40.2%) and 1253 (15.3%), respectively.

Combination therapy was preferred in all grades of hypertension (69.7, 75.8 and 85.2% in grade 1, 2 and 3 respectively). More than 3 AHDs were used in 28.0% patients with grade 3 hypertension versus 12.9% with grade 1.

The most preferred AHDs either used as monotherapy or in combination were the ARBs (40.9%). The most frequently used ARB, diuretics, CCBs, beta-blockers, and ACE-I were Telmisartan (22.3%), Chlorthalidone (2.7%), Amlodipine (11.4%), Metoprolol (10.6%), and Ramipril (0.5%), respectively. Among FDC, most prescribed in grade 1 hypertension was Hydrochlorthiazide + Telmisartan and in grade 2 and 3 were Amlodipine + Telmisartan

Discussion & Conclusion: Combination therapy for antihypertensive drugs is frequently use in elderly patients having dyslipidaemia with hypertension and the most used drugs are the ARBs

Abstract Topic: Paramedical Science

Abstract ID: ORAL-143

Abstract Title: Effect of Transcutaneous Electrical Nerve Stimulation (Tens) Applied to Cervico-Thoracic Ganglion Region for Blood Pressure in Hypertensive Patients.

PresentingAuthor: Ritu Naresh Patel

Affiliations: Physiotherapy, MVP Samaj's College of Physiotherapy, Nashik, MS, India

Background: Hypertension is a widely prevalent disease that increases the risk of end organ damage, leading to myocardial infarction, heart failure, stroke and renal impairments. TENS is primarily used for pain relief. Effect of burst TENS on peripheral vascular resistance imply a sympathetic inhibition which causes peripheral vasodilation and thus increases blood flow and lower blood pressure. When TENS is used to manage cardiac pain, it not only works in the expected pain-relieving manner, but also appears to suppress sympathetic activity as revealed by a drop in systolic blood pressure and heart rate. The sensory and afferent pain impulses from the heart are transmitted to the central nervous system via fibres in the cervical and thoracic sympathetic nerves. Purpose was to find an alternate method for reducing blood pressure in hypertensive patients.

Aims & Objectives: Aim was to study the effect of transcutaneous electrical nerve stimulation (TENS) applied to cervico-thoracic ganglion region for blood pressure in hypertensive patients. The objective was to evaluate effectiveness of TENS as a hypertensive therapy to asses systolic and diastolic blood pressure before and after use of TENS.

Patients / Materials & Methods: 10 patients of age group 40-70 years, both males and females with hypertension were included in the study. Patients were given TENS (burst mode) on cervico-thoracic ganglion region (C7-T1 vertebral processes) for duration of 30 minutes thrice a week for three weeks.

Results: As the p value for systolic and diastolic blood pressure and pulse rate is <0.0001 it proved to be statistically significant in reducing blood pressure after application of TENS.

Discussion & Conclusion: The study concluded that application of TENS at cervico-thoracic ganglion region has a significant effect in reducing blood pressure in hypertensive patients.

Abstract Topic: Others

Abstract ID: ORAL-144

Abstract Title: Relationship Between Self-Reported Sleep Quality, Body Mass Index and Blood Pressure in Normal Adults

PresentingAuthor: Shubhankar Mahapure

Authors And Affiliations: Shubhankar Mahapure: Physiotherapy, MVP Samaj's College of Physiotherapy, Nashik, India|AmritKaur: Physiotherapy, MVP Samaj's College of Physiotherapy, Nashik, India

Background: Sleep is an essential part of life, important in preserving human health and performance. Poor quality of sleep can affecthealth and vital functions.

Aims & Objectives: To investigate the relationship between sleep quality, body mass index and blood pressure in normal adults.

Determine whether sleep duration was significantly and inversely related to indicators of body mass index and blood pressure

Patients / Materials & Methods: A cross-sectional study with a total sample size of 402.

Both male and female aged between 18-50 were included in the study.

Results: Stepwise multiple regression was used to analyse the data.

Discussion & Conclusion: There was a strong statistical association between body mass index and PSQI Score.

The relationship between sleep and obesity is likely mediated by multiple pathways.

An upregulation of the activity of orexin neurons and changes in appetite-regulating hormones may affect food intake.

- Ghrelin, a hormone promoting hunger, increases with sleep restriction, whereas leptin, a hormone contributing to satiety perception, decreases.
- In this study, there was statistical association between high blood pressure and PSQI.
- This relationship may, in part, be the result of biologic mechanisms, suggesting that sleep deprivation may alter cortisol stress hormones and the sympathetic nervous system, resulting in elevated BP.

Subjects with poor sleep quality are associated with increased BMI and hypertension.

Abstract Topic: Epidemiology

Abstract ID: EPOSTER-146

Abstract Title: Disease Burden Among Hypertensive Patients in Low Income Household in Malaysia, Respond Study.

PresentingAuthor: Farnaza Ariffin

Company Name: Universiti Teknologi MARA

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Background: Hypertension is a leading contributor to the global burden of disease. Previous study revealed that the control is still low in Malaysia especially in low-income household (B40 group).

Aims & Objectives: To assess the disease burden among hypertensive individual in low-income household in Malaysia

Patients / Materials & Methods: Data for this analysis was obtained from the Responsive and Equitable Health Systems-Partnership on Non-Communicable Diseases (RESPOND). The low-income communities (B40, income < RM3, 855, 2014) were selected in rural and urban in four peninsular states (Selangor, Kelantan, Perak and Johor). Adults aged 35-70 living within the low-income household were selected and assess for eligibility (self-reported a history of hypertension diagnosis or were identified as hypertensive during blood pressure screening. Among all hypertensive members in the household, one was randomly selected to participate. A validated questionnaire was administered by trained personnel consisting of sociodemographic data, information on housing characteristics, socio-economic characteristics of households and participants, and hypertension-related care experiences, practices knowledge and attitudes.

Results: A total 611 respondents involved in this study involving 162 (26.5%) males and 449 (73.5%) females. The median duration of hypertension for male was 5.00 (IQR: 7.27) years and 5.00 (IQR: 7.00) for females. Diabetes mellitus was the highest among other co-morbidity (36.7%), followed by stroke (6.2%), asthma (5.1%) and heart attack (4.7%). The other co-morbidities were less than 1%. 53.7% of the respondent has no other co-morbidity. However, 38.6% of the respondent has one comorbidity, 7.4% has two comorbidities and 0.3% has 3 comorbidities.

Discussion & Conclusion: About half of the hypertensive individuals in low in-come household in Malaysia had at least one comorbidity which diabetes mellites is the most prevalence co-morbidity.

Abstract Topic: Basic Research

Abstract ID: ORAL-148

Abstract Title: A Novel Peptide Elabela Is Associated With Hypertension-Related Subclinical Atherosclerosis

PresentingAuthor: Hendrianus Hendrianus

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Background: Elabela is a newly identified peptide, together with apelin acting as an endogenous ligand that activates the angiotensin receptor-like 1 receptor (APJ). Previous experimental and clinical studies have shown the association of elabela with hypertension, but not much is known about the role of elabela in hypertension-related atherosclerosis.

Aims & Objectives: To determine the association between plasma elabela peptide levels and subclinical atherosclerosis in hypertensive population.

Patients / Materials & Methods: A total of 104 subjects with hypertension were included in a cross-sectional study. Plasma elabela levels were measured using enzyme-linked immunosorbent assay (ELISA) by firstly extracting the peptide following the manufacturer's instructions. The parameter of subclinical atherosclerosis was assessed by measuring the carotid intima-media thickness (IMT) using ultrasound.

Results: Elabela levels were decreased in a higher stage of hypertension group as compared with stage 1 (0.23 [0.13, 0.45] ng/mL vs. 0.14 [0.09, 0.23] ng/mL; P = 0.000), and in the group with increased carotid IMT as compared with normal IMT (0.24 [0.13, 0.38] ng/dL vs. 0.15 [0.10, 0.23] ng/dL; P = 0.005). In addition, linear correlation analysis showed that elabela had a significant negative correlation with systolic blood pressure (r = -0.340, P = 0.000) and carotid IMT (r = -0.213; P = 0.030). In multivariate analysis, decreased elabela levels (cutoff 0.155 ng/dL) were associated with higher cardiovascular risk (OR 5.0, 95% CI 1.8-13.5, P < 0.001).

Discussion & Conclusion: This study for the first time demonstrated the association of circulating elabela with carotid IMT in hypertensive patients, implicating elabela is involved in the pathogenesis of hypertension-related subclinical atherosclerosis. Declined elabela levels were also associated with an increased cardiovascular risk.

Abstract Topic: Pathophysiology

Abstract ID: ORAL-154

Abstract Title: Correlation Of Serum Uric Acid Levels With Certain Anthropometric Parameters And Arterial Blood Pressure In Over Weight And Obese Subjects

PresentingAuthor: Shivam Verma*, Narsingh Verma, Akanksha Tandon, Sunita Tiwari

Authors And Affiliations: Department of Physiology, King George's Medical University, Lucknow, UP, India

Background: Asymptomatic hyperuricemia without comorbidities predicts the development of hypertension. Moreover, hyperuricemia also contributes to the development of hypertension from prehypertension.

Aims & Objectives: To find out correlation of serum uric acid levels with certain anthropometric parameters and arterial blood pressure in over weight and obese subjects

Patients / Materials & Methods: The study included 224 urban drug naive over weight and obese Indian subjects above 18 years of age from general population of city of north India. Uric acid concentrations were estimated by the uricase method. Blood pressure was measured by using Automatic Digital Sphygnomanometer (OMRON JPN 2) with mean of 3 readings following all standard pre-requisite. Anthropometric measurements and information on lifestyle factors and disease history were collected by in-person meeting.

Results: All participants of the study subjects had BMI more than 23.5. Correlation of weight, BMI, SAD, WHR, SBP & DBP was positively correlated & statistically significant

Discussion & Conclusion: Statistical data shows remarkable results for significant correlation of uric acid level with BMI, WHR, SAD, SBP & DBP. Hypertrophy results into and oxidative stress when the supply of energy starts to exceed the storage capacity of adipocytes, as a result adipokines suchasinterleukin-1 (IL-1), interleukin-6 (IL-6) and tumor-necrosis factor alpha (TNF-α) arereleased more frequently which lead to low-grade chronic inflammation. Evidence indicates that uric acid can cause direct endothelial injury and dysfunction. Uric acid levels are much lean towards visceral obesity than overall body fat content.

Abstract Topic: Prevention

Abstract ID: ORAL-158

Abstract Title: Association Between Ankle Brachial Index and Hypertension so as to Predict The Severity of Coronary Artery Disease in Suspected Cad Patients

PresentingAuthor: Akanksha Tandon*, Shivam Verma, Narsingh Verma, Sunita Tiwari

Authors And Affiliations: King George's Medical University, Lucknow, UP, India

Background: ABI is an important measure of cardiovascular risk factors including atherosclerosis, hypertension, smoking, diabetes, having family history of CAD. The strength of relationship between low ABI and PAD has been widely studiedbut it is equally important and a matter of concern to establish a relationship between ABI and hypertension in suspected CAD patients without the history of PAD so as to predict the severity of cardiovascular events in future. ABI is a simple, quick andnon-invasive screening tool that can be used to identify cardiovascular risk factors considering the increasing burden of morbidity and mortality due to CVD in Asian countries.

Aims & Objectives: To determine the relation between ABI and hypertensionin suspected CAD patients

Patients / Materials & Methods: This is a cross sectional Hospital based analytical study done on 210 suspected CAD patients. ABI was measured by a validated oscillometric device of all subjects attending the OPDas a screening tool . In cases where values were differing between right and left sidelower values were taken. ABI<0.9

(significant for vessel disease) was recorded and ROC curveusing SPSS was developed to define ABI cut off with hypertension which best predicts the severity of CAD.

Results: A total of 210 patients were evaluated and 47 out of them were hypertensive with ABI<09. ROC curve depicts area under the curve 0.699, standard error 0.036 and significance value <0.05.

Discussion & Conclusion: ABI<0.9 is significantly correlated with hypertensionwhich is a modifiable risk factor. Considering its low cost, easy to use it should be used as a screening tool for predicting and preventing severe coronary vascular diseases in future.

Abstract Topic: Basic Research

Abstract ID: ORAL-162

Abstract Title: Inflamatory Markers Il-6 And Tnf-A in Newly Diagnosed Hypothyroid Patients and Changes after Attainment of Euthyroid State

PresentingAuthor: Shilpi Goyal

Authors And Affiliations: Shilpi Goyal: University College of Medical Sciences, Delhi, NEW DELHI, India|AbhinavDixit: AIIMS, Jodhpur, Jodhpur, India|Neelam Vaney: University College of Medical Sciences, Delhi, NEW DELHI, India|S. V. Madhu: Medicine, University College of Medical Sciences, Delhi, NEW DELHI, India

Background: Cytokines play an important role in autoimmune thyroid disease. These molecules, produced by thyroid follicular cells, are essential for T and B cell growth and their differentiation. Tumour necrosis factor-alpha (TNF-α) is a cytokine having numerous immunological and metabolic activities and is an important stimulus for interleukin-6 (IL-6) production. Receptors for TNF-α have been demonstrated in thyroid follicular cells and are implicated in the cytotoxic mechanisms that characterize the thyroid destruction in autoimmune thyroid disease. Interleukins play an important role in immune system function. Their deficiency causes autoimmune diseases or immune deficiency.

Aims & Objectives: *Aim-*

To assess serum levels of IL-6 and TNF- α in hypothyroidism.

Objectives: To measure and compare the levels of IL6 and TNF-α in patients with hypothyroidism and controls, to measure and compare the levels of IL6 and TNF-α before and after attainment of euthyroid state and to find the correlation between serum levels of IL6, TNF-α and hypothyroid state.

Patients / Materials & Methods: Thirty newly diagnosed hypothyroid patients of age group 18-50 years (M=31.67, SD= ± 8.405) were recruited from the thyroid clinic, GTB Hospital, Delhi. Thirty age and sex matched controls were also recruited for the study after taking written consent.

The patients attained euthyroid status usually after three months of treatment as evident by changes in the levels of hormones. The level of inflammatory biomarkers was evaluated twice at three months interval in patients and once at the beginning in controls by solid phase sandwich ELISA, using kits from Diaclone.

Results: In this study serum levels of IL6 and TNF-α were increased in hypothyroid subjects in comparison to euthyroid controls. After the attainment of euthyroid state there was decrease in the IL6 and TNF-α levels. A positive correlation of serum IL-6 and TNF α levels with hypothyroidism was found.

Discussion & Conclusion: Serum levels of IL-6 and TNF-α was increased and positively correlated with hypothyroid state. Thus we concluded that the early diagnosis and treatment does have significant effect on restoration of serum levels of biochemical markers.

Abstract Topic: Basic Research

Abstract ID: EPOSTER-164

Abstract Title: Association Between Serum Ferritin and Blood Pressure in Post-Covid Males and Females: A Pilot Study

PresentingAuthor: Lhainunhoi L Khongsai

Authors And Affiliations: Lhainunhoi L Khongsai: Physiology, University College of Medical Sciences;GTB HOSPITAL, National Capital Territory of Delhi, India|Asha Yadav: Physiology, University College of Medical Sciences;GTB HOSPITAL, National Capital Territory of Delhi, India|Shiva Narang: Medicine, University College of Medical Sciences;GTB HOSPITAL, National Capital Territory of Delhi, India|PriyankaGogoi: Pathology, University College of Medical Sciences;GTB HOSPITAL, National Capital Territory of Delhi, India|Shukla Das: Microbiology, University College of Medical Sciences;GTB Hospital, NCT of Delhi, India

Background: Serum ferritin has been found to have a positive association with blood pressure but this relationship has not been studied in post-COVID males and females.

Aims & Objectives: We aimed to study correlation between serum ferritin and systolic & diastolic blood pressure in post-COVID males and females separately and combined.

Patients / Materials & Methods: Blood pressure and serum ferritin were estimated in 14 females and 17 males in the age group of 30-60 years from GTB Hospital who were laboratory-confirmed cases of COVID-19 and had recovered 1-3 months prior to this study. Subjects having any history of chronic inflammation, auto-immune disorders and cardiovascular diseases were excluded from the study. Institutional ethical clearance and informed written consent were obtained. Blood pressure was measured using a mercury sphygmomanometer and serum ferritin values were estimated using chemiluminescence immunoassay/CLIA kit (Siemens Ltd.). Statistical analysis was done by Pearson's correlation test using SPSS version 24. Correlation between serum ferritin and systolic & diastolic blood pressure in all the subjects and in males and females separately was analyzed

Results: In post covid females, we found a significant positive correlation of serum ferritin with systolic blood pressure (r=+0.2; p=0.05) but not with diastolic blood pressure (p=0.2). In males and in combined subjects (males and females), serum ferritin was not found to be associated with systolic as well as diastolic blood pressure

Discussion & Conclusion: This study suggests that serum ferritin acts as an independent risk factor for isolated systolic hypertension

in post-COVID females. Therefore, serum ferritin should be assessed in post-covid females to avoid complications of systolic hypertension. Further studies with larger sample size are required to establish the gender specific relationship between serum ferritin and blood pressure.

Keywords: Serum Ferritin, Blood Pressure, Post-COVID

Abstract Topic: Hypertension in Young

Abstract ID: EPOSTER-165

Abstract Title: Measurement Of Ankle-Brachial Index And Its Correlation With Inter-Arm Systolic Blood Pressure Difference In Young Adults By Using Automated Oscillometric Device

PresentingAuthor: Manish Kumar Verma*, Vibha Gangwar, Rajani Bala Jasrotia

Authors And Affiliations: Dr. Ram Manohar Lohia Institute of Medical Sciences, Lucknow, UP, India

Background: Ankle-Brachial index (ABI) ≤0.9 and inter-arm systolic blood pressure difference (IASBPD) >10 mmHg has been reported as risk factor for Peripheral arterial disease (PAD) and cardiovascular disease (CVD). Various previous studies concluded that CVD can be predicted when IASBPD is >10 mmHg.

Aims & Objectives: To find Correlation between ABI and IASBPD and also use of Automated Oscillometric device for measurement of ABI in young adults.

Patients / Materials & Methods: Total 200 young adult males of age group between 20 – 40 years were recruited. ABI measurement and IASBPD were performed using Watch BP Office oscillometric device equipped with two cuffs for simultaneous double arm measurements.

Results: The mean age and BMI of the participants was 27.53±4.06 yrs and 23.46±2.04 kg/m2 respectively. Their mean right and left arm systolic and diastolic blood pressure was 130.13±8.34 mmHg, 79.30 ±8.37mmHg and 128.01±8.23mmHg, 78.20±8.32mmHg, respectively. Mean Inter-arm systolic blood pressure difference was 3.67±2.56 mmHg and out of 200 participants 9 subjects were IDSBP>10mmHg. Mean ABI was 1.13±0.09. There was significant correlation betweenBMI>25 kg/m2, ISDBP>10 mmHg with ABI value <=0.9.

Discussion & Conclusion: Our finding suggested that ABI measurement by the automated oscillometric device is reliable, free of examiner bias, less time consuming, and also helps in the simultaneous assessment of inter-arm systolic blood pressure difference. Detection of IASBPD>10 mmHg and ABI≤0.9 should prompt consideration of further assessment and management of risk factors.

Abstract Topic: Others

Abstract ID: ORAL-166

Abstract Title: To Assess Cardiovascular Risk by Calcium Artery Coronary Score Between Diabetic and Non Patients in A Tertiary Care Centre

PresentingAuthor: Aruna Ravi

Authors And Affiliations: Aruna Ravi: CCS University, Meerut,Uttar Pradesh, India

Background: Diabetes is a chronic disease that occurs either when the pancrease doesnot produce insulin and body cannot use effectively the insulin that it produces. Although wide variety of method are available to assess CAD risk in diabetic patients CACS is the most sensitive among all these methods.

Aims & Objectives: To calculate CACS as a marker of CAD risk-

Correlation of CACS with duration of diabetes

To compare CACS in diabetic and non daibetics.

Patients / Materials & Methods: The study is conducted in department of medicine in LLRM medical college of meerut and SVBP Hospital, meerut, UP. The study will be case control study which includes daibetic patients as cases nad non daibetic patients as control. Coronary artery calcification will be seen using 128- slice single source CT machine. CACS score will be calculated by using Agatson method. Data collected will be analysed using epiinfo7. 2.3.1

Results: As data is being analysed result will be presented at the time of presentation.

Discussion & Conclusion: As data is being analysed conclusion will be presented at the time of presentation.

Abstract Topic: Hypertension in Elderly Patients

Abstract ID: EPOSTER-174

Abstract Title: Cardiovascular Risk Evaluation In Elderly With Hypertension And Comorbidities.

PresentingAuthor: Onam Verma

Company Name: hind institute of medical sciences

Authors And Affiliations: Onam Verma: barkatullah university, bhopal, India|Nishant Kanodia: general medicine, hind institute of medical sciences, sitapur, India;general medicine, indraprasth apollo Hospital, New Delhi, India

Background: Cardiovasculardisease is the leading cause of moratality globally and it is known that CVD increases with age[1]. HighBP is associated with the strongestevidence for causation and has a high prevalence of exposure.

Scientific theories are most credible because they are structured and subject to refutation by systemiatic observation and experimental hypothesis testing. Our theoryfulfillsvirtually all of the criteria for causality proposed by Bradford Hill [2].

In order to develop and implement an effective strategy for prevention and treatment of CVD in older people, it is critical to have a more comprehensive understanding of a wide range of CVD risk factors and the factors salient to this population. However, few studies focused on the older people [3, 4].

Aims & Objectives: This study aim to calculate the CVD risk in elderly patients with known case of hyprtension and comorbidities like diabetes mellitus attending OPD at HIND Hospital, sitapur, U.P., India, in department of general medicine.

Patients / Materials & Methods: All patients in elder age group(>60yrs) attending OPD of general medicine dept.at HIMS, sitapur, U.P. (320) were asked for clinical history of hypertension and other associated chronic non communicable diseases.

Study conducted in post covid era between april 2021- august 2021. We collected-age, biochemical marker(lipidprofile), history(smoking, stroke, diabetes, neuropathy and family history) of OPD patients with hypertension. All data puted in a portable diagnostic tool in the form of Icardiacmachinei.e. intelligent cardiac (pictures attached)wasengaged in relevant data to get their outcome as different catagories of cardiac risk on the basis ofscoring system.

Low cardiac risk(score 1-3) Intermediate cardiac risk(4-6) High cardiac risk(7-10)

Results: The mean age of prticipants was 68.1 years with the majority in the age group 60-69 years majority of patients were men (60%). With highest primary school education (40%), married(98%) and lived in rural(92%).

The prevalence of hypertension was 70.5%, of whom 70% were on antihypertensive medications. The mean systolic and diastolic blood pressure were 143.5 mm Hg and 79.2 mm Hg, respectively. The CVD risk factors compared between patients with different age group, sex, smoking habbits, dyslipidaemia. We found that women had significantly higher mean systolic BP (145.2 mmHg, 95%CI) and higher proportion of dyslipidaemia(74.6% with 95% CI) than men. However there is no significant difference between the age groups on the other CVD risk factors for men and women

Discussion & Conclusion: It is time to focus greater attension on initiatives for prevention of the typical age –related increase in BP in addition to control of high BP in those with established hypertension .

Abstract Topic: Basic Research

Abstract ID: EPOSTER-175

Abstract Title: Retrospective Analysis of Hypertensive Urgencies Presenting to Emergency Department Of Tertiary Care University Teaching Hospital

PresentingAuthor: Haider Abbas

Company Name: KING GEORGE'S MEDICAL UNIVERSITY

Authors And Affiliations: Mukesh Kumar: King George's Medical University, Lucknow, India|Utsav Anand Mani: King George's Medical University, Lucknow, India|Haider Abbas: Emergency Medicine, King George's Medical University, lucknow, India

Background: Management of patients presenting to Emergency department with acute hypertension is challenging because of varied clinical presentation mixed with anxiety in crowded Emergency departments.

Aims & Objectives: This retrospective study was done with the aim of identifying the characteristic of patients, treatment and outcome at the time of disposition from the Emergency department.

Patients / Materials & Methods: :Retrospective analysis of Hospital records of 60 emergency department patients with elevated blood pressure (systolic BP >180 mm Hg and/or diastolic BP >110 mm Hg) was done.The accompanying presenting symptoms were also recorded.

Results: The mean age of the patients was 45.9+/-10.8 years; 66 percent were male and 34 percent were female patients.The main presenting features were Headache, anxiety, palpitations, vertigo or recording of falsely high blood pressure by automatic measuring apparatus..The mean blood pressure on presentation to the Emergency department was 190+/-20.8/106+/-16.8 mm Hg.The family history of hypertension was given by 30 % patients, 40% of patients were on antihypertensive medication, rest were not on any medication or were unable to give history of medications as were being treated by rural practitioners and using dispensed medications.

Amlodipine or esmolol or labetalol were given to control hypertension apart from IV paracetamol 100 mg for pain relief.The duration of stay in the unit was approximately 8 hours 20 minutes +/- 3 hours 24 minutes.

Discussion & Conclusion: Majority of theEmergency medicine department presentations were related to undiagnosed hypertension, improper medication or drug drop-outs.Healthcare screenings should be done routinely at primary care centres to rule out hypertension and other associated illnesses to decrease load on Hospital Emergency departments.

Abstract Topic: Basic Research

Abstract ID: ORAL-179

Abstract Title: Short Term Heart Rate Variability In Normotensive And Hypertensive Indians.

PresentingAuthor: Dr. Srushti Nayankumar Patel

Company Name: Pramukhswami Medical College

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Background: Hypertension is key contributor for overall mortality across the globe. Pathophysiology of hypertension is not known till today. Autonomic imbalance is considered as one of the factor for development of hypertension. Heart rate variability (HRV) is non-invasive technique to record cardiovascular autonomic functions

Aims & Objectives: The present study was undertaken to check heart rate variability in normotensive and hypertensives

Patients / Materials & Methods: Participants for the present study was enrolled after getting approval of Institutional Ethics Committee. This is an ongoing cross-sectional study and it is being conducted at Department of Physiology, Bhaikaka University, Karamsad, Gujarat. Basal heart rate (BHR), systolic blood pressure (SBP), and diastolic blood pressure (DBP) were recorded by the oscillometric method using automated BP monitor Welch Allyn H-BP100SBP. Short term HRV recoding for 5 minutes was done by RMS Polyrite after following all standard precautions. Short term HRV recoding was done using lead II ECG. HRV recording was done by time-domain and frequency-domain analysis. Statistical Analysis: Descriptive data analysis was done by SPSS trial version. Data analysis between two groups was done by an independent t-test

Results: Total 351 participants were enrolled for the study. Systolic and diastolic blood pressures were more in hypertensives as compared normotensives. Total power was reduced in hypertensives (327.76 ± 479.20) as compared to normotensives (553.72 ± 873.48). SDNN was also reduced in hypertensive (31.32 ± 19.40) as compared to normotensive (118.33 ± 1278.69). NN50 & pNN50 were also reduced in hypertensives as compared to normotensives and it was statistical significant also

Discussion & Conclusion: The current study indicates that hypertension affects heart rate variability and reduced heart rate variability is seen in hypertensive as compared to normotensives.

Abstract Topic: Epidemiology

Abstract ID: EPOSTER-185

Abstract Title: Fat Mass Reverses The Protective Effect of Lean Mass on Cardiovascular Metabolic Factors In Children and Adolescents: Results From the China Child and Adolescent Cardiovascular Health Study

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Background: Despite an increasing number of studies investigating the links between BMI and cardiovascular disease, but these studies cannot accurately assess the influence of fat and muscle mass and their interaction on cardiometabolic abnormalities.

Aims & Objectives: To investigate the associations of body composition compartments, especially the interaction between fat and muscle mass, with cardiometabolic abnormalities in children and adolescents.

Patients / Materials & Methods: This nationwide cross-sectional study consisted of 8905 samples aged 6 to 18 years. Multivariable-adjusted linear regression coefficients were calculated by mixed effect models to assess the associations between body composition and cardiometabolic abnormalities. Hierarchical analysis to study the effect of interaction on cardiometabolic abnormalities.

Results: In the multivariate model containing FMI and LMI, FMI was associated with SBP (β=1.75, P<0.001 and β=1.64, P<0.001) and DBP (β=1.54, P<0.001 and β=1.31, P<0.001) in boys and girls, separately. But LMI only associated with SBP in boys (β=3.08, P<0.001) and girls (β=1.31, P<0.001). Regarding the influence of the interaction between fat and muscle mass on the cardiometabolic abnormalities, taking the High FMI-Normal LMI as the reference group, boys' (with High FMI-High LMI) SBP, DBP TG, LDL cholesterol, non-HDL cholesterol has significantly increased 4.37, 1.68, 0.18, 0.13, 0.21, separately. Girls' (with High FMI-High LMI) SBP, DBP and TG have significantly increased 5.22, 1.69 and 0.11.

Discussion & Conclusion: There are different relationships between body composition and cardiometabolic abnormalities: FMI is associated with an increase in the presence of all these factors, while LMI is protectively associated with TC, LDL cholesterol, and non-HDL cholesterol. But, when there is too much fat mass in the body, it will reverse the protective effect of lean mass on cardiovascular metabolic factors in children.

Abstract Topic: Others

Abstract ID: EPOSTER-191

Abstract Title: A Meta-Analysis Of Randomized Controlled Trials Of Pde5 Inhibitor Sildenafil In The Treatment Of Heart Failure With Preserved Ejection Fraction

PresentingAuthor: Runmin Sun

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Background: In the general population aged ≥ 60 years, 4.9% were identified to have heart failure with preserved ejection fraction (HFpEF).Heart failure with preserved ejection fraction already accounts for more than half of all heart failure (HF) Hospital admissions.The results of clinical trials of phosphodiesterase (PDE) 5 inhibitors for the treatment of HFpEF patients are inconsistent.

Aims & Objectives: Thus, we undertook a meta-analysis to evaluate the clinical value of sildenafil for HF with preserved EF (HFpEF) patients.

Patients / Materials & Methods: Relevant studies were searched and identified in the PubMed, Cochrane Library and EMBASE databases. We searched randomized controlled trials (RCTs) that compared PDE5i with placebo in HFpEF and extracted relevant clinical data. We used stataMP 16 to analyze the collected data and to compare the data of treatment group with that of the placebo group. The outcomes

were analyzed as continuous and dichotomized variables using fixed or random effect model, and their results were reported as STD mean difference (SMD) and odds ratio (OR) with 95% confidence interval, respectively. The inclusion criteria : (1) study design: randomized controlled trial, (2)type of participants: patients with HFpEF, (3) intervention: PDE5 inhibitor sildenafil, (4) comparator: placebo (5) outcomes: adverse events and improvements of cardiac hemodynamics and function.

Results: Six RCTs enrolling 471 HFpEF patients were included in the meta-analysis.Compared with placebo, sildenafil was not significantly associated in death (OR=1.12, 95%CI: 0.06 to 19.40), adverse events (OR=2.55, 95%CI: 0.67 to 9.62) .Also, sildenafil therapy had no impact on the patient's six-minute walk test, PASP, E/e', peak VO2, NT-proBNP but improved at PVR(SMD =-1.04, 95% CI =-1.96 to -0.13) significantly compared to placebo in HFpEF patients. Whereas, if only the RCT study with HFpEF combined with pulmonary hypertension is included, sildenafil therapy was associated with a marked improvement in E/e' (SMD=-0.745, 95% CI =-1.24 to -0.25) in HFpEF patients combined with pulmonary hypertension.

Discussion & Conclusion: The findings of this meta-analysis of RCTs suggest that compared with placebo, sildenafil therapy was associated with the improvement of diastolic function in HFpEF patients combined with pulmonary hypertension, while sildenafil treatment of HFpEF patients does not increase death or reHospitalization.

Abstract Topic: Others

Abstract ID: EPOSTER-197

Abstract Title: RHOA/ROCK Pathway Participates In The Study Of Related Mechanisms Of Apatinib In The Treatment Of Breast Cancer-Induced Hypertension

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Background: As medical advances have enabled clinicians to cure tumors, many patients with cancer live longer, leading to a gradual increase in the incidence of CVDs, including hypertension. With the second highest incidence among tumors, breast cancer has gradually attracted widespread attention and has been the topic of numerous studies. Studies have confirmed that CVD is one of the causes of death in elderly patients with breast cancer.

Aims & Objectives: To explore activation of the RhoA/ROCK pathway whether involved in the mechanism of apatinib in the treatment of breast cancer-induced hypertension and whether ROCK pathway inhibitors can prevent and reverse the increase in blood pressure and target organ damage caused by apatinib in the treatment of breast cancer, thus confirming its therapeutic effect on this type of hypertension.

Patients / Materials & Methods: Thirty female Balb/c nude mice aged 4-6 weeks and the human breast cancer cell MDA-MB-231 were used for breast cancer tumorigenesis. Mice were randomly divided into 5 groups, each with 6 mice; the first group: no tumor model, 2ml normal saline gavage; the second group: just tumor model, 2ml normal saline gavage; third group: high-salt diet (giving customized 8% high-salt feed); fourth group: apatinib 50mg/kg.d, dissolved in 2ml of normal saline by gavage; fifth group: apatinib 50mg/kg. d dissolved in 2ml of normal saline by gavage + Y27632 10mg/kg. d intraperitoneal injection. After the tumor grew to the target volume of 100-150mm3, intervention was performed for 3 weeks, blood pressure was measured weekly, and body weight was measured every day.

Results: 1. The blood pressure of the fourth group was higher than ther groups; the blood pressure of the third group was increased, but there was no statistical difference between the blood pressure of the fourth group; the blood pressure of the fifth group of mice was lower than fourth group. 2. The ventricular thickness of the mice in the third and fourth groups was thicker than that in the first and second groups, and the ventricular thickness of the fifth group of mice was less than that of the fourth group. 3. Masson staining of mouse aorta from strong to weak blue staining is: the fourth group, the third group, the fifth group, the second group, the first group. 4. The results of mouse aortic mRNA and Western Blot showed that RhOA and ROCK1 in the third, fourth, and fifth groups were higher than those in the first and second groups, and the fifth group was lower than the fourth group. 5.The mouse aortic immunohistochemistry results show that the third and fourth groups of COLI and COLIII are higher than those of the first and fourth groups, the second group, the fifth group has a lower degree of staining than the fourth group.

Discussion & Conclusion: The RhoA/ROCK pathway is involved in the occurrence of apatinib-induced hypertension and its target organ damage. After applying apatinib to breast cancer model mice, the blood pressure level increased, the endothelial function decreased, the vascular stiffness increased, and the blood Endothelin levels, RhoA/ROCK pathway protein expression and corresponding mRNA levels are all increased, which proves that RhoA/ROCK pathway inhibitors can prevent and reverse the increase in blood pressure and target organ damage caused by apatinib.

Abstract Topic: Prevention

Abstract ID: ORAL-204

Abstract Title: Correlation Of Pulse Transit Time, Blood Pressure And Body Mass Index In Normotensive Adults: Risk Of Hypertension In Future

PresentingAuthor: Anil Kumar Gangwar

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Background: Poor sleep health may be a potential risk factor for cardiovascular diseases, if proper sleep hygiene is not maintained during young adult life-span. We aimed to analyse the correlation in blood pressure, microarousals and body mass index (BMI) in normotensive young adults with different BMI.

Aims & Objectives: To see the correlation of blood pressure with pulse transit time indices and BMI

Patients / Materials & Methods: In this cross sectional study a total number of 80 normotensive subjects were enrolled from Out Patient Department (OPD) and divided into two groups based on BMI. Study was done after ethical clearance by ethical committee of King George's Medical University. Anthropometric measurements and blood pressure were taken by trained nursing staff. Sleep quality was assessed by Pittsburgh sleep quality index. Micro-arousals during nocturnal sleep were measured by full night polysomnography. Day time sleepiness was measured by Epworth sleepiness score.

Results: Subjects with high BMI had poor quality of sleep. Mean value of apnea index, flow limitation index, systolic blood pressure and diastolic blood pressure were higher in subjects with high BMI. Average PTT and flow limitation PTT index were positively correlated with body mass index. Correlation of PTT deceleration index with body mass index was statistically significant (p= 0.035). Aponea index, flow limitation index and number of desaturation < 90% per hour were positively correlated with BMI.

Discussion & Conclusion: Adults with higher BMI have more mircoarousals and positively correlated with change in blood pressure. So to prevent the development of hypertension in future life, nocturnal sleep quality should also be taken into consideration in normotensive adults with higher BMI.

Abstract Topic: Hypertension in Women

Abstract ID: ORAL-205

Abstract Title: Hypertension As A Distinct Forecaster Of Multivessel Coronary Artery Disease In Women With Non-Stemi

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Background: Hypertension is a significant risk factor for cardiovascular diseases (CAD). In developing countries, hypertension in women is often ignored and undiagnosed due to a common misconception that women have lower risk of CAD. Now-a-days, hypertension among women is increasing significantly in developing countries. It is necessary to pay attention to early diagnosis and management of hypertension to decrease the risk of CAD.

Aims & Objectives: The purpose of this study was to correlate risk of CAD with hypertension in women admitted with non-ST segment elevation myocardial infarction (Non-STEMI).

Patients / Materials & Methods: An observational study was performed on 444 female patients admitted with Non-STEMI in the Department of Cardiology of National Heart Foundation Hospital and Research Institute, Dhaka, Bangladesh between January 2018 and December 2020. All female patients with Non-STEMI who undergo Coronary Angiography (CAG) were included this study. CAG was done and vessel involvement was assessed through the angiographic profile of the study population.

Results: The mean age of the study population was 55.88 ± 10.47 years. Among the study population hypertension was found in 53.4% patients and the rest (46.6%) were normotensive. CAG profiles of the normotensive patients showed that 29.5% had single vessel disease (SVD), 19.8% had double vessel disease (DVD), 14.5% had triple vessel disease (TVD) and 36.2% had normal findings. Whereas, among hypertensive patients 35.4% had SVD, 25.7% had DVD, 18.1% had TVD and only 20.7% had normal findings. Multivessel disease (MVD) elevated considerably in hypertensive women than normotensive women.

Discussion & Conclusion: The findings of this study suggest that hypertension appears as an individual predictor of MVD in women with Non-STEMI. Early detection and proper management of hypertension can significantly reduce the risk of CAD among women.

Abstract Topic: Basic Research

Abstract ID: EPOSTER-211

Abstract Title: Supplementary Kcl Is Associated With Decreased Abundances Of Sodium Chloride Transporter (NCC) and Phosphorylated Ncc (PNCC) In Urinary Extracellular Vesicles (Uevs) Of Healthy Adults Maintained on a High-Na+ Low-K+ Diet

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Background: The putative "renal-K+ switch" mechanism is proposed to link low-K+ intake with Na+-dependent Na+ retention and involves activation of NCC in the distal convoluted tubule responding to low-K+ intake and suppression responding to high-K+ intake.

Aims & Objectives: This study examined NCC and pNCC in the uEVs of healthy adults on a high-Na+ diet to determine tubular responses to alterations in K+ intake.

Patients / Materials & Methods: The study design was a double-blind, randomised and placebo-controlled trial. Healthy adults maintained on a high-Na+ (~200mmol/day), low-K+ (~60mmol/day) diet underwent a run-in period of 1-week followed by a cross-over study, with 5-day supplementary KCl (active phase, Span K, 24mmol TDS) or 5-day placebo administered in random order and separated by 2-day washout. NCC and pNCC were measured in uEVs after each phase. Participants who met dietary compliance (≥80%) and urinary response requirements were included in analyses.

Results: Among the 18 (out of 28) participants who met inclusion criteria, high-Na+ high-K+ diet was associated with higher levels of plasma K+ and 24-Hour urinary K+, Na+/K+, Cl- and aldosterone, compared to high-Na+ low-K+ diet. Although there were no apparent changes in plasma levels of aldosterone, renin and Cl-, plasma levels of the aldosterone/renin ratio and HCO3- during the active phase were higher than in run-in. NCC (fold change [FC](active/placebo) =0.74 [0.30, 1.69], p<0.01) and pNCC (FC=0.81 [0.19, 1.75], p<0.05) in the active phase were significantly lower than the placebo phase, whilst the ratio of pT60-NCC/NCC remained unchanged. Correlation analyses revealed an inverse correlation of plasma K+ with NCC and Δurinary K+ with ΔpNCC in human uEVs. Ambulatory systolic blood pressure positively correlated with timed urinary Na+/K+.

Discussion & Conclusion: In healthy adult subjects maintained on a high-Na+ low-K+ diet, KCl supplementation was associated with a fall in NCC and pNCC, consistent with the "renal-K+ switch" model.

Abstract Topic: Basic Research

Abstract ID: ORAL-212

Abstract Title: Beneficial Role Of Ezetimib in Cardiac Cachexia in Animal Model of Mice

PresentingAuthor: Bhoomika M. Patel

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Background: Cachexia is a predominant and significant pathological disorder related with perpetual cardiovascular breakdown. NRF2 plays a significant role in coordinating the cellular processes and protects the sensitive cellular components like proteins and DNA materials from oxidative insults. Ezetimibe is reported to activate Nrf2-Keap1 pathway without causing cytotoxicity.

Aims & Objectives: To investigate the role of Ezetimibe, a NRF2 activator, in cardiac cachexia.

Patients / Materials & Methods: Doxorubicin (2 mg/kg, i.p) was administered in Balb/c mice for alternate days for first week and then once a week for next 4 weeks. Treatment with Ezetimibe was given from the 4th week for 28 days following which various parameters were evaluated.

Results: Cardiac cachexic mice exhibited reduction in body mass markers, altered lipid and carbohydrate metabolism, increase in cardiac and inflammatory markers alongwith cardiac atrophy and skeletal muscle wasting. Treatment with ezetimibe increased the body mass makers and reduced the cardiac and inflammatory markers. Ezetimibe also produced significant increase in total cholesterol, LDL, triglyceride and VLDL leveland weights of various adipose tissue suggesting control in lipid alterations.the was able to prevent these alterations. There was significant increase in serum glucose and weights of skeletal muscles after ezetimibe treatment. Parameters of cardiac atrophy were also restored by ezetimibe treatment.

Discussion & Conclusion: Our data suggest that NRF2 activator, ezetimibe produces beneficial effect on cardiac cachexia in doxorubicin induced cardiac cachexia model.

Abstract Topic: Epidemiology

Abstract ID: EPOSTER-215

Abstract Title: Knowledge, Attitude and Practice of Healthcare Professionals Regarding Home Blood Pressure Monitoring (HBPM) In Malaysia

PresentingAuthor: Ooi Inn Jia

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Background: Home blood pressure measurements (HBPM) plays a significant role in the diagnosis and management of hypertension. As <50% of patients on hypertensive treatment reach target BP control, HBPM could be used to improve BP control.

Aims & Objectives: This study aims to evaluate the knowledge, attitude and practice of healthcare professionals (HCPs) regarding HBPM in Malaysia.

Patients / Materials & Methods: Malaysia participated in this questionnaire that was done in Asia. HCPs working in different settings were invited to participate from November 2019 to June 2021. Data were collected using self-administered questionnaires distributed online. Ethics approval was given by the institution.

Results: A total of 552 HCPs were recruited. The majority were GPs (89.7%) working in clinics (86.8%). On a weighted average, they managed 61.7patients with hypertension every week.

For knowledge and attitude among the HCPs, <40% thought the significance of HBPM was well-recognized by the physicians and <20% thought it was well-recognized by the patients with hypertension. 32.3% viewed HBPM of 135/85mmHg as the reference value for HBPM hypertension.

Among the doctors, 63.7% used HBPM as the most important BP measurement to decide their treatment; 99.0% recommended HBPM to their patients with hypertension; on a weighted average, 34.7% of their patients with hypertension measure their own BP(HBP) and 32.7% have HBPM devices.

When it comes to HBPM practice among the HCPs, 97.8% recommended automated electronic devices; 55.4% thought HBPM should be measured lifelong; 40.9% recommended measuring 3 days/week; 63.2% recommended measuring twice/occasion; 35.7% instructed recording all measurements taken on each occasion and 46.4% evaluated the mean value; 67.9% evaluated equally based on morning & evening readings; 49.6% regularly validated the accuracy of BP devices by comparing with auscultation; 45.8% advised measuring HBP ≤30mins after waking up; 46.7% instructed measuring post-micturition; 94% advised measuring sitting-up; 65% recommended resting ≥5mins before measurement; 48.2% recommended measuring before taking antihypertensive drugs; 57.8% recommended measuring before breakfast in the morning and 43.5% before bedtime in the evening.

Discussion & Conclusion: This study has provided some insight into Malaysian HCPs' perspectives and practice on the use of HBPM. There were several areas where knowledge and the practice of HBPM were poor hence it's important to educate them in the proper ways.

Abstract Topic: Hypertension in Young

Abstract ID: ORAL-217

Abstract Title: Alpha Adducin Gene Polymorphism Is More Common In Female As Compare To Male In Essential Hypertensive Patients

PresentingAuthor: Qulsoom Naz

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Background: Essential hypertension is a complex and multifactorial disorder resulting from environmental and genetic factors, and their interactions. α-adducin-1 (ADD1) gene is salt sensitive gene which has its role in etiology of essential hypertension via renal sodium reabsorption. Therefore, the G460T polymorphism of ADD1 gene may be associated with new onset of CVD & stroke under the influence of essential hypertension.

Aims & Objectives: To assess the relationship between male & female genetic polymorphism (ADD1 G460T polymorphism) under influence of essential hypertension.

Patients / Materials & Methods: We recruited total 255 study subjects, 110 normotensive as control (63 male and 47 females), 145 hypertensive patients (85 male and 60 females) and 240 hypertensive. All study samples were genotyped for ADD1 polymorphic alleles and analyzed the relationship between different genotypes with respect to anthropometric and clinical parameters.

Results: Clinical and anthropometric parameters (such as SBP, DBP, FBG, height, weight, HbA1c, BMI & urinary electrolyte) of study population were found highly statistically significant ($p<0.05$) at base value. Further, genotype wise comparison of all the above parameters revealed most of them as non-significant ($p>0.05$). Whereas, comparison between genotype frequencies in essential hypertensive patients, specifically in male ($p=0.027$) and female ($p=0.015$) and in combination with both male ($p=0.017$) and female ($p=0.005$) revealed a higher HbA1c level in variant T allele. In case of essential hypertensive patients, female population showed a highly statistically significant ($p=0.003$) difference in GT & TT allele frequency in aplpha adducing gene polymorphism.

Discussion & Conclusion: Anthropometric & Clinical parameters may be the indicative factors for essential hypertension. Variant T allele of ADD1 gene may be considered as the risk factor for the development of stroke & cardiovascular diseases in essential hypertensive patients.

Abstract Topic: Hypertension in Young

Abstract ID: EPOSTER-222

Abstract Title: Association of Certain Anthropometric Parameters with Adolescent: A Cross-Sectional Study

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Background: Chronic disease begins early in life, yet population data are sparse on potential causal factors in adolescent Hypertensionin in north India.

Aims & Objectives: To find the current status of prevalence of adolescent hypertension in 25 schools in North India

Patients / Materials & Methods: A cross-sectional study was conducted in 25 schools in and around Lucknow, Uttar Pradesh, India from January 2018 to April 2019. A proforma with detailed medical history was filled of 800 students of standard 7th to standard 12thage (11 to 17 years of age). Anthropometric measurements of height, weight, waist size, hip size were done. Heart rate and Blood pressure both systolic, diastolic was taken thrice each in left and right arm with Omron Blood pressure monitor and average was noted.

Results: 62% (n= 496) were boys and 38% (n = 304) were girls. Mean age was 14.26 ± 0.8 years. Boys were found to be more obese as compared to girls. 92 students (11.5%) were found to have systolic hypertension while 29 (3.62%) were found to have (DBP) diastolic

hypertension. Mean body weight was 46.44 kgs. Average height of 800 students was 145.94 centimetres. Overall prevalence of hypertension was 15.12% in Indian school going adolescents. Mean (SBP)systolic blood pressure for 800 students was 115.13 mm of Hg and mean diastolic blood pressure was 68.17 mm of Hg. Mean heart rate was 86.17. Waist size and hip size were significantly associated with a greater chance of hypertension. Gender were found to be independent predictor for systolic hypertension.

Discussion & Conclusion: Adolescent HTN is now not rare in developing countries like India, this may be attributed to family history and other social factors including dietary habits and stress levels.

Abstract Topic: Prevention

Abstract ID: ORAL-224

Abstract Title: Association Of Treatment-Resistant Hypertension Defined By Home Blood Pressure Monitoring With Cardiovascular Outcome

PresentingAuthor: Keisuke Narita

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Background: In diagnosis of treatment-resistant hypertension (TRH), guidelines recommend out-of-office blood pressure (BP) measurements, ambulatory BP monitoring (ABPM) and home BP monitoring (HBPM). Although evidence of an association between ABPM-evaluated TRH and cardiovascular disease (CVD) prognosis has accumulated, data are sparse regarding HBPM-evaluated TRH.

Aims & Objectives: We investigated the association of HBPM-evaluated TRH and CVD events risk.

Patients / Materials & Methods: We analyzed data from the nationwide practice-based J-HOP (Japan Morning-Surge Home BP) study, which recruited 4, 261 outpatients (mean age 64.9 years; 46.8% men; 91.5% hypertensives) who underwent morning and evening HBPM for 14 days.

Results: During 6.2±3.8 years (26, 418 person-years) follow-up, 270 total CVDs (stroke, coronary artery disease, aortic dissection, and heart failure) occurred. The adjusted hazard ratio (HR) (95%CIs) of uncontrolled TRH, i.e., uncontrolled BP using 3 classes of medications including diuretics or ≥4 classes of medications, for total CVD risk compared to controlled BP using <3 classes were 2.02 (1.38–2.94) and 1.81 (1.23–2.65) in home BP of 135/85 mmHg and 130/80 mmHg, respectively. Additionally, patients with TRH defined by guidelines, i.e., uncontrolled BP using 3 classes of medications including diuretics or controlled/uncontrolled BP using ≥4 classes of medications, also had higher total CVD risk compared to non-TRH under all home BP criteria. Moreover, in patients with uncontrolled apparent-TRH, i.e., TRH defined by office BP, uncontrolled home BP (≥135/85 mmHg) was still associated with atherosclerotic CVD (CVDs except heart failure) risk (adjusted HR [95%CI], 2.38 [1.09–5.19]).

Discussion & Conclusion: This is the first study to demonstrate an independent association between TRH evaluated by HBPM and CVD outcomes.

Abstract Topic: Pharmacological Management

Abstract ID: ORAL-225

Abstract Title: Study on Reduction of Microalbuminuria Amongst Hypertensive Patients With Use of Triple Combination Therapy (Triplixam).

PresentingAuthor: Abhishek Arun

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Background: Persistent microalbuminuria is earliest indicator of Chronic Kidney Disease amongst hypertensive patients and is also associated with target organ damage resulting in stroke, retinopathy and adverse cardiovascular outcomes.

Aims & Objectives: The present study was aimed to evaluate the reduction in microalbuminuria amongst uncontrolled essential hypertensive patients with use of triple combination therapy.

Patients / Materials & Methods: It was a Hospital-based cross-sectional prospective study done on 50 essential hypertension patients having uncontrolled blood pressure and the presence of microalbuminuria in urine. Total duration of therapy was 3 months and triple combination therapy used in study as antihypertensive was Triplixam (Perindopril 4mg, Amlodipine 5mg and Indapamide 1.25mg). Patients having Diabetes and other comorbidities were excluded from the study. Patients were evaluated at baseline and end-of-study visit for SBP, DBP, Urine for albumin excretion. Ethical clearance was taken prior to inclusion of patients.

Results: There was significant reduction in both SBP (18mm Hg) and DBP (10mm Hg) with use of triple combination therapy (Triplixam). Microalbuminuria turned to normal albumin excretion in urine that was statistically significant ($p<0.01$) was most significant and convincing finding.

Discussion & Conclusion: Triplixam is an excellent triple agent that can reduce blood pressure promptly and bring about reduction in urine albumin excretion thereby decreasing risk of end target organ damage. Early detection of renal dysfunction through microalbuminuria and prompt treatment can confer future protection from end stage renal disease.

Abstract Topic: Others

Abstract ID: ORAL-229

Abstract Title: Processing of Banana Peel - Powerfull Warrior for Hypertension

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Background: It has been observed that about 33% urban and 25% rural Indians are hypertensive. Hence Banana peel was used to develop a new product to reduce LDL level as it contains phytosterol.

Aims & Objectives: Hence, Quantification of phytosterol and development of functional product and quality evaluation of the same was the objective.

Patients / Materials & Methods: Dwarf cavendish banana peel was powdered. Quantification of phytosterol in unripe peel was analysed by GC-MS and the powder was incorporated to developed cookies. The physical properties of cookies were studied. The proximate analysis was performed, along with the anti-oxidant analysis. The data collected was analysed by SPSS method.

Results: Unripe Banana peel possess phytosterols like β-Sitosterol, campesterol, stigmasterol. Overall acceptability score of V2 was best accepted formulated cookies. The thickness and spread ratio of T0 and V2 was (5.83±0.75) and (7.26±1.15), (6.55±1.00) and (5.42±1.00) respectively and was negatively correlated (-0.975) to each other. Its proximate analysis showed that V2 is rich in fibre(20g), fat (42.5g) and potassium(52600mg). IC Value of V2 was 49.8.

Discussion & Conclusion: Hence, as there is high content of phytosterol present in peel, new food product development will help to reduce the LDL levels, and high level of Potassium will also enhance the anti-hypertensive property of the cookies. They can be consumed by people who have other co-morbidities as it is high in dietary fibre.

Abstract Topic: Basic Research

Abstract ID: ORAL-235

Abstract Title: Disruption in Circadian Rhythm Increases Cardiovascular Disease Risk Factors in Shift Working Nurses

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Background: Shift work is associated with behavioral, psychosocial and physiological consequences in the body that may cause cardiovascular disease (CVD) risk. Therefore, in this study we tried to demonstrate the disruption in circadian rhythm of blood pressure by Ambulatory Blood Pressure Monitor in shift working nurses.

Aims & Objectives: To demonstrate the disruption in circadian rhythm of blood pressure by Ambulatory Blood Pressure Monitor in shift working nurses.

Patients / Materials & Methods: :A total of 50 nurses, 25 Night shift working nurses (NSWN) and 25 Day shift working nurses underwent to Ambulatory Blood Pressure Monitoring (ABPM) for a period of 24 hours. Along with measurements of inflammatory markers (hs-CRP and IL-6) risk factors for cardiovascular disease among NSWN and DSWN and their possible relationship with disrupted circadian rhythm measured by circadian rhythm questionnaire.

Results: The mean systolic and diastolic blood pressure for a period of 24 hours and mean diastolic blood pressure readings during sleep times were found higher in night shift working nurses than the day working nurses (118 v 112mmHg, $P<0.05$; 72 v 68 mmHg, $P<0.05$; 62 v 59 mmHg, $P<0.05$). High mean Blood pressure readings were found to be more frequent in the NSWN ($P<0.05$) than in DSWN. No significant differences were found in IL6 and hs-CRP levels. However, a significant difference in circadian rhythm abnormality was found in NSWN than DSWN.

Discussion & Conclusion: 7-day/24-h ABPM in night shift workers showed a reduced circadian rhythm variation in blood pressure along with abnormality in circadian rhythm itself as compared to day shift workers.Work schedules and the consequent rest-activity schedules affect circadian rhythms, with likely long-term impact on health. Therefore working in critical care unit during night hours leads to abnormal blood pressure in night shift working nurses suggesting that this type of work, in which sleep is disturbed leading to mental stress could be a direct risk factor in cardiovascular diseases.