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Abstract Topic: Basic Research

Abstract ID: 88

Ajaya Deep Singh, Narsingh Verma, Archna Ghildiyal

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Abstract Title: A Prospective Study of Effect of Yogic Exercise over Blood Pressure

Background: Regular exercise and yogic mediation have positive impact on physiological and psychological status of body. Important risk factors for sedentary life and its marker is hypertension in all . Urbanisation and sedentary life with increasing stress and substance abuse cause increase risk in day to day life . Regular meditation and yoga have much reduction in blood pressure and improvement in heart rate variability

Aim: To compare before and after 6 months training of Surya Namaskar blood pressure and BMI

Methods: A prospective study done in department of physiology KGMU in age group 20-45 yrs . A total 80 normal healthy individuals who was selected and categorized on body BMI and basal blood pressure was taken. After 6 month trained highly observed regular yogic exercise "SURYANAMASKAR" blood pressure and BMI was compared.

Result: The demographical parameters were insignificant . Yogic exercise effect over blood pressure was statistically significant in age group when it was compared to initial parameters. Female 37 and 43 male were included . Decline in mean blood pressure for systole was 1. 25 mmHg and 2 mmHg for diastolic value for these change in SBP and DBP was respectively 0. 014 and <0. 001.

Conclusion: Regular exercise has positive impact on cardiovascular health and may be good preventive measures to control the hypertension

Abstract Topic: Basic Research

Abstract ID: 87

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Abstract Title: Lipid Indices and Hypertensive Emergencies.

Background: Rising concerns of morbidities are associated with altered lipid metabolism. With the epidemic of obesity, risks of cardiovascular disorders has increased manifold. The various atherogenic indices such as Atherogenic Index of Plasma (AIP), Castelli's Risk 1, Castelli's Risk 2 and Coefficient of Atherogenicity can be used as an index for cardioembolic risk estimation. Finding a suitable blood lipid index to be used as a biomarker for weight can serve as a simple anthropometric indicator of obesity which will also help in preventing obesity and therapeutic treatment. Use of these indices is of valuable importance in resource limited areas where novel investigations can be expensive as well as unavailable .

Aim: The purpose of this study is to investigate presence of connection between lipid indices associated with altered lipid metabolism and occurrence of Hypertensive Emergencies and Urgencies.

Methods: This is a retrospective study. Detailed history and thorough clinical examination was done and blood was evaluated for various biochemical tests. Atherogenic Index of Plasma and various other Indices were calculated of each subject with the help of log tables. 100 patients reporting to emergency medicine department were a part of this study.

Result: Coefficient of Atherogenicity was seen to be raised in Ischaemic stroke, Accelerated Hypertension and hypertensive nephropathy.

Castelli's Risk 1 was seen to be raised were Hypertension with significant association ($p<0.05$)

Castelli's Risk 2 was not seen to be increased in any neurological hypertensive emergency but was elevated in heart failure.

Atherogenic index of plasma was seen to be raised in pregnancy with Hypertension and all hypertensive disorders.

Conclusion: Atherogenic index of plasma (AIP) was the most accurate marker for hypertensive disorders reporting to emergency medicine department. This pilot study was done on only 100 patients, thus there is a need for a larger sample size and a multicentric study on this subject.

Abstract Topic: Epidemiology

Abstract ID: 86

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Abstract Title: To study the prevalence of hypertension and dysglycemia in HIV patients

Background: Acquired immune deficiency syndrome caused by HIV has been one of the biggest pandemic and global health challenges. Though anti retroviral therapy has significantly decreased The mortality and morbidity of HIV patients it has its own metabolic complications. the study estimates the prevalence of diabetes mellitus and hypertension among HIV patients receiving ART and compares the various metabolic parameters with the ART regimen used and also with its duration.

Aim: To study the prevalence of hypertension and dysglycemia in HIV patients.

Methods: This is a cross sectional study. total 120 patients of HIV(confirmed by ELISA) having age more than 18 years, attending medicine OPD, ART OPD and admitted in indoor wards in our hospital were included.

The patients on drugs Which impair blood sugar levels and affect blood pressure were excluded from study. Duration of HIV, HAART therapy, CD4 counts, blood sugar fasting and postprandial, blood pressure, lipid profile and all parameters were marked. The patients were categorised into two groups- TL/RTV and TLE.

Result: In our study we found seven patients having increased blood pressure out of these hypertensive patients 3 were diabetic and 4 patients were in pre diabetic stage. 26 patients were found to have decreased HDL cholesterol and 30 were having increased LDL cholesterol. This deranged lipid profile predicts for the risk of cardiovascular disease in HIV patients taking HAART. Thus after studying BP variable we found mean systolic BP 115. 3+/-14. 2 mmhg in the NON-PI regimen and mean systolic BP was 129. 1+/-15. 1mmhg in the PI containing regimen which were statistically significant.

Conclusion: The length of time an HIV infected patients is on HAART regimen Significantly increased the odds of hypertension and hyperglycemia. Thus there is a need to assess at Jamie patients periodically for CVS risk factors while on regimen.

Abstract Topic: Comorbidities

Abstract ID: 85

Aditya Pratap Singh, Sandhya Gautam, Snehlata Verma, Piyush Verma

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Abstract Title: "Prevalence of dyslipidemia in retroviral patients on HAART therapy –"A case control study. "

Background: Since the discovery of anti retroviral therapy (cART), it has significantly modified the prognosis of individuals infected by the Human Immunodeficiency Virus-1(HIV), with marked improvement in morbidity and mortality rates world wide1. Although the clinical benefits are considerable, the protease inhibitors contained in these antiretroviral regimens produce a lipodystrophy syndrome characterized by changes in body fat distribution, hyperlipidemia, and insulin resistance.

Aim: To see the prevalence of dyslipidemia in retroviral patient, who are on HAART therapy and its association with patient who are not on HAART therapy.

Methods: The Case control Study was conducted at medicine department L. L. R. M Medical College Meerut. Cases and controls were taken from ART PLUS centre L. L. R. M Medical College Meerut.

Result: Out of 142 cases, 90 (63. 3%) were male and 52(36. 6%) were female. In control group 48(52. 7%) were male 43(47. 2%). Maximum no of patient both in cases and control group fall in between the range of 18-40years of age group. On seeing anthropometric parameter (weight, waist hip ratio, and BMI) between cases and control group there was no significant difference found (p>. 05). On comparing biochemical parameter (total cholesterol, triglyceride, HDL, VLDL) between cases and control group no significant difference were found except in LDL level . Difference in CD4 count in cases and control (cases CD4 538. 13±308, control CD4 856±312. 69, p <0. 0001) was found significant.

Conclusion: In our study cases on HAART therapy had high level lipid profile derangement than control group, and difference was statically significant (p0. 014). We advocate effective life style and pharmacological management in patient on HAART therapy.

Abstract Topic: Pathophysiology

Abstract ID: 84

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Abstract Title: Recurrent Quadriparesis as a Presentation of Systemic Disease

Background: Acute Onset quadriparesis is a common clinical entity encountered in emergency however it has varied etiologies, hypokalemia being the commonest.

Etiology of Hypokalemia in an individual ranges from translocational shift to renal excretion of potassium. Translocational shift includes use of insulin, beta agonist and channel defects causing periodic paralysis. However Renal excretion of potassium though seen due to diuretics commonly, systemic causes cannot be overlooked for the same.

Aim: It is often said that a case of hypokalemia is never to be left undiagnosed, so here we report a case of a young female with severe hypokalemia who was extensively evaluated and found to have proximal RTA secondary to Sjögren's syndrome.

Methods: On further investigating patient was positive for ANA (1:320), anti Ro (anti-SSA) and anti La (anti-SSB). RA factor, Anti CCP and other autoimmune antibodies were negative. Schirmer's test was positive and patient was planned for labial salivary gland biopsy and renal biopsy but did not give consent. Further evaluation for Renal Tubular Acidosis showed high excretion of urinary calcium, urinary phosphate and fractional excretion of phosphorus. Ultrasound abdomen was normal.

Result: Patient was diagnosed as a case of Quadriparesis due to Hypokalemia secondary to Proximal Renal Tubular Acidosis due to primary Sjögren's syndrome based on antibody titers, clinical examination and history. She responded well to the treatment and was discharged home.

Conclusion: Although Sjögren's syndrome might have a varying clinical presentation, presentation of a person with renal symptoms in the form of hypokalemia as the first symptom might create the confusion to reach the diagnosis. This case highlights the importance of high index of suspicion for possibility of Sjögren's syndrome, especially in the middle-aged females, who present with hypokalemia and metabolic acidosis.

Abstract Topic: Comorbidities

Abstract ID: 83

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Abstract Title: Incidence of Systolic Hypertension in Type 2 DM

Background: Hypertension is a major public health problem not only in India but across the world. Type 2 Diabetes mellitus is another major problem which is growing fast continuously. Insulin Resistance is the common soil for both Hypertension & Type 2 Diabetes mellitus. Handling of hypertension becomes more difficult in patients of diabetes due to more common isolated systolic hypertension.

Aim:

1) To estimate the incidence of Isolated Systolic Hypertension in Type 2 DM.
2) To assess the trends of isolated systolic hypertension in Type 2 DM with increasing age

Methods: It was a retrospective single centre cohort study done among the Type 2 DM patients in Lucknow, Uttar Pradesh. A total of 844 patients with Type 2 DM of age ranging between 18 to 80 years were included in which 45% were female. Isolated systolic hypertension is defined as systolic BP above 140 mm of Hg while diastolic still keeping less than 90 mm of Hg. Statistical analysis was done using Chi-square test and multiple logistic regression.

Result: Incidence of Isolated Systolic Hypertension in patients with Type2DM was found 20. 7% while hypertension was 48% using cut off 140/90 mm of Hg. There was no difference noted by gender, BMI, HbA1c, hypothyroidism, dyslipidemia & Covid status. Although we observed increasing incidence of isolated systolic hypertension with age.

< 45 years	10. 5%
45-54 years	13. 7%
55-64 years	24. 9%
65+ years	35. 6%

Conclusion: An incidence of isolated systolic hypertension of 20. 7% observed among patients with diabetes and it was found increasing with age although it was not found changing with gender, BMI, HbA1c, dyslipidemia, Hypothyroidism & COVID status.

Abstract Topic: Complementary Medicine & Others

Abstract ID: 82

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Abstract Title: Effectiveness of Hypertension Education program: An Observational Study in the Community

Background: Efficient control of Hypertension, a global epidemic, requires spreading awareness and disseminating knowledge among the general population. The perception and awareness of hypertension are widely varying with the geographic and socioeconomic factors

Aim: To capture the therapeutic benefits of an online hypertension program (Ghar Ghar BP Care) among people residing in different parts of the country.

Methods: A questionnaire-based survey was conducted on the satisfaction and perception of the hypertension program. The hypertension program has a video-assisted module in English, Hindi, and 11 regional languages on proper hypertension knowledge. Survey results were included in the analysis.

Result: A total of 126 patients participated in this survey. Of the 49 patients who reported average knowledge before watching the video-assisted module "Ghar-Ghar BP Care", 29 (59. 2%) reported having good/very good knowledge after watching the video-assisted module; however, 23 patients who reported good knowledge before, 14 (60. 9%) reported having very good knowledge after watching the video-assisted module. A total of 57% of respondents reported that they understood the basics of HTN through the video modules. The majority of patients (72%) reported that the module helped them to understand home BP monitoring. The majority of patients said that low sodium intake [<5 g/day (44%)] was good for their health. Moreover, approximately 87% responded that they would refer to this instruction video to their friends and family.

Conclusion: Overall, this study revealed that the hypertension program (Ghar Ghar BP Care) video-assisted module was an effective tool for imparting knowledge on HTN management.

Abstract Topic: Hypertension in Young

Abstract ID: 81

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Abstract Title: Prevalence and Determinants of Hypertension in MBBS students of Hind Institute of Medical Sciences, Barabanki, Uttar Pradesh

Background: Hypertension or increased blood pressure is a major public health problem in India. Medical students are highly susceptible to develop transient rise in their blood pressure while working in stressful conditions. Some of them may develop hypertension also.

Aim:

1) To estimate the prevalence of hypertension among medical students.
2) To identify the determinants of hypertension.

Methods: It was a cross-sectional study done among the students of Hind Institute of Medical Sciences, Barabanki, Uttar Pradesh. A total of 500 subjects, aged 17 to 25 years, 309 boys and 191 girls were included. Statistical analysis was done using Chi-square test and multiple logistic regression.

Result: Prevalence of hypertension among medical students was 18. 5%. A significant association of hypertension with males (OR=0. 328), family history of hypertension (OR=2. 812) level of physical activity (OR=0. 395) and BMI (OR=3. 710) and academic performance (OR=2. 611) was observed.

Conclusion: A high prevalence of hypertension was found among medical students. BMI and poor physical activity are the modifiable factors associated with hypertension which can be addressed to reduce the magnitude of hypertension in this study group.

Abstract Topic: Nonpharmacological Management

Abstract ID: 80

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Abstract Title: The effect of yoga therapy on heart rate, blood pressure in patients of heart failure.

Background: Heart failure is a complex clinical condition that develops as a result of structural or functional impairment of ventricular filling or ventricular ejection of blood. Yoga is a mind body technique which combines set of physical exercises (asanas) in sync with breathing techniques (pranayam), relaxation and meditation. It has been reported that yoga results in an improvement in decrease in blood pressure when combined with dietary and lifestyle modification.

Aim: To study the effect of yoga therapy on blood pressure and heart rate in patients of heart failure.

Methods: The study was conducted in patients attending medicine and Cardiology opd at LLRM medical college, meerut. 160 patients were included and divided into 2 groups(yoga group and control group) of 80 patients each in which yoga group received a 12 week yoga therapy along with standard medical therapy and a control group which received only a standard medical therapy.

Result: The result shows significant decline in heart rate and blood pressure in yoga group as compared to the control group.

Conclusion: There was significant decline in blood pressure and heart rate at the end of 24 weeks in both yoga group and control group however decline in both parameters was more in yoga group as compared to control group.

Abstract Topic: Nonpharmacological Management

Abstract ID: 79

Neeraj Kumar, Biswajit Majumder, Kaushik Biswas, Santosh Revankar

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Abstract Title: Behavior analysis of salt consumption and hypertension: Challenges among Indian patients

Background: Salt consumption is more than double to WHO recommendation (<5gm/day) and contributes to hypertension in India, Awareness and behavior towards the salt consumption significantly impacts the effective treatment of hypertension.

Aim: To understand the awareness and behavior of Indian patients concerning salt consumption and its impact on blood pressure (BP).

Methods: A questionnaire-based survey among patients with hypertension. Data collected from across India at the doctors' clinic through personal interviews.

Result: A total of 2215 patients participated in this survey. Around 27% of hypertensives were unaware that excess salt increases BP. A total of 37% of participants were not aware that outside food has a high salt intake. The awareness of high salt content in outside food was comparatively more among younger adults (73%) than elder (53%). Despite the knowledge, ordering food or having food outside 2-3 times a week was more among younger adults (37%) than elderly (19%). More than 70% of participants never checked or calculated sodium/salt content of packed food. On trying to control salt intake due to BP, only 58% of participants tried to control their salt content due to high BP, most common reasons for not to limit salt control is food become tasteless (61%). With univariate logistic regression analysis, predictors of good awareness were understanding the outside food has high salt intake (OR [95% CI]: 4. 855 [3. 869-6. 091]; p<0. 001), calculating daily salt intake (1. 786 [13. 37-2. 385]; p<0. 001) and tried to control daily salt intake due to high BP (5. 364 [4. 259-6. 757]; p<0. 001).

Conclusion: Overall data indicate that awareness about the deleterious impact of excess salt consumption and understanding of outside food has high salt intake is low in India. Calculating daily salt intake and controlling salt intake due to high BP showed a positive and significant association with awareness.

Abstract Topic: Epidemiology

Abstract ID: 78

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Abstract Title: correlation between essential hypertension and BMI

Background: The relationship between BMI and blood pressure has long been the subject of epidemiological research. Positive association of BMI and blood pressure has also been reported among Asian populations. India in a process of rapid economic development and modernization with changing life style factors has an increasing trend of Hypertension especially among urban population. It is important from a public health perspective to have data on the characteristics and health of a population and of different subgroups in the population. It is necessary to identify individuals and population at risk.

Aim: To study the correlation of essential Hypertension with BMI.

Methods: The study was carried out in Department of Medicine, L. L. R. M. Medical College, Meerut during the period of one year.

Source of Data-

A total of 200 participants attending Medicine OPD/ IPD were selected randomly and included in the study. Out of these 100 were hypertensive comprising of 50 males and 50 females and served as the study group while other 100 normotensive participants comprising of 50 males and 50 females formed the control group.

Criteria for Inclusion-

Case:

Age- 18-45 Years

People having systolic BP > 140 mm Hg and/or diastolic BP > 90 mm Hg.

Control-

Age- 18-45 Years

People having systolic BP 90 mm Hg to 139 mm Hg and diastolic BP 60 mm Hg to 89 mm Hg.

Exclusion Criteria-

- Pregnancy
- Night shift workers
- Any kind of substance abuse
- Heavy Exercisers
- Diabetes Mellitus
- Secondary Arterial Hypertension or other Cardiovascular disorders including concomitant Angina Pectoris, Heart Failure, stroke, life threatening Arrythmia, Myocardial Infarction or Coronary Revascularization.
- Presence of nephropathy
- Presence of any other chronic illness

Result: We found that there is a statistically significant correlation between essential hypertension and BMI. An elevated BMI being associated with pre-Hypertension may suggest that such individuals are at increased risk of progressing to frank Hypertension.

Conclusion: We found that there is a statistically significant correlation between essential hypertension and BMI. An elevated BMI being associated with pre-Hypertension may suggest that such individuals are at increased risk of progressing to frank Hypertension.

Abstract Topic: Basic Research

Abstract ID: 77

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Abstract Title: The Effect of Ocimum sanctum (Tulsi) on Blood Pressure & other clinical parameters in Hypertensives

Background: In the last few decades many studies have been carried out by Indian scientists & researchers to suggest the role of essential oils & eugenol (Tulsi extract) in the therapeutic potential of Tulsi.

Many herbal medicines in different oral formulations have been recommended & also been used for hypertension , diabetes , metabolic syndrome & other chronic diseases.

Aim: The main aim of this study is to investigate the effect of Tulsi on blood pressure & on clinical parameters of hypertensive patients.

Methods: 100 patients were randomly selected for this study from the OPD of Department of Medicine, KGMU. Detailed history of each patient was obtained regarding age, sex, year of diagnosis & duration of Hypertension, associated risk factors , family history & any associated illness. Cases were divided into 2 groups randomly, one group received placebo , served as control group & another group received Tulsi extract & served as study group. Patients of study group were asked to take 5 ml of Tulsi extract with plain water in morning & evening before food for 3 months regularly. Baseline parameters were taken of every patient i. e. BMI, FPG, BP, HbA1c, Lipid profile.

Result: Anthropometric & Biochemical data of control & study groups were studied for different variables in the beginning & end of study & there was no significant difference in baseline parameters. On comparing control & study population for effect of Tulsi therapy an improving trend was observed in study group after 3 months treatment , changes in all parameters were found significant except W/H ratio & BMI.

Conclusion: Tulsi therapy significantly reduces blood sugar, BP , Lipid profile. Therapeutic effect of Tulsi is shown & can be used with diet & drugs for management of high BP.

Abstract Topic: Comorbidities

Abstract ID: 76

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Abstract Title: Repercussions of sarcopenia in elder population

Background: Sarcopenia was introduced in 1988. It represents loss of muscle power and mass especially in elder population but in 2010, the definition was altered to be low muscle functions. This generally starts in 4th decade of life and degraded to nearly 50th percent muscle mass in 8th decade of life. It's cause is widely regarded as multifactorial. Such factors are neurological decline, hormonal changes, inflammatory pathways activation, chronic diseases, lack of activities, fatty infiltration and poor nutrition. All shown to be contributing factors, apoptosis, mitochondrial degeneration and angiotensin system in skeletal muscles also highlighted the mechanism which causes sarcopenia. This was agreed upon in a number of research papers. The society of sarcopenia, cachexia and wasting analyses the clinical condition by preparing sarc-F questionnare, measuring grip strength of chair stand together with DXA estimation of appendicular muscle mass. As the person grows older, he starts losing his muscle mass and functions both. This may lead to his loss of independence in life and starts depending on others for his or her many routine works. In the long run person may get debilitated and may get hospitalized. This hospitalizations may cause extra burden on the economy of the person. He may need a long term care. As we all know that we declines naturally as we grow older. But this is a clinical condition which is not

natural and arises due to above described factors.

Aim: To raise awareness about sarcopenia in clinicians as well as in common people.

Methods: Multiple search engines like pubmed, EMBASE, COCHRANE library were searched and different research papers were studied and a review is presented.

Result: Very important clinical condition to which nearly 50 million people all over the world are suffering.

Conclusion: If ignored today people suffering from sarcopenia will rise to 200 million in next 40 years. So research and awareness is essential in healthcare professionals and common people .

Abstract Topic: Complementary Medicine & Others

Abstract ID: 75

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Abstract Title: Evaluation of yoga and relaxation techniques in the management of hypertension associated with osteoarthritis knee

Background: Yoga is a physical mental and spiritual discipline originated in ancient India to improve or develop one's inherent power in a balanced manner.

Aim: To evaluate benefits of blood pressure and WOMAC scoring in Knee OA patients Following "add-on yogic asana" in the conventional treatment on hypertension and Knee osteoarthritis.

Methods: Patients with HTN and OA Knee were randomized into two groups -group A with conventional treatment of HTN, OA knee + add on Yoga. Group B with conventional treatment antihypertensive drug treatment only. BP and WOMAC score for clinical parameters of severity of Osteoarthritis knee were assessed before and after giving the treatment (follow up at the interval of 3 months).

Result: Statistically significant fall was present in mean systolic and diastolic pressure of both groups. Significant reduction occurred in doses of antihypertensive drugs, of group A. In few subjects (Group A) blood pressure was controlled with Yoga & RT. Blood pressure rose significantly to pre- Yoga levels in patients who left practicing yoga. With the use of yoga & RT in therapy of HTN, requirement of antihypertensive drugs may be significantly decreased and in some cases may be totally dispensed with. Assessment by WOMAC has shown that severity of pain was 3. 267 times lower (p=0. 001), physical functions were 3. 414 times improved (p=0. 001), score of WOMAC functions was 3. 410 times lower (p=0. 001) and blood glucose level decreased after giving treatment with Yoga & RT for 3 months as compared to the group B.

Conclusion: Yoga & RT is beneficial as a useful adjunct in treatment of HTN when combined with the conventional therapy.

Abstract Topic: Hypertension in Young

Abstract ID: 74

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Abstract Title: White Coat Hypertension in Adolescents

Background: White coat hypertension (WHT), more commonly known as white coat syndrome, is a form of labile hypertension in which people exhibit a blood pressure level above the normal range, in a clinical setting, although they do not exhibit it in other settings. It is believed that the phenomenon is commonly due to anxiety experienced during a clinic visit.

Aim: To achieve clinical finding on elevated blood pressure in a clinical setting.

Methods: This study was proposed to evaluate Blood Pressure Monitoring (BPM) data in Adolescents in clinical setup. The total numbers of subjects taken were 100 children of age group between 11 to 17 years in which 58 were males while 42 were females. At least three readings were taken and the average of last two readings was noted. All protocol of BP measurement was followed. The adolescents with elevated BP during the clinical trial were given Omron home monitoring BP machines. In this survey, 100 adolescents identified having raised BP. These adolescents were advised for home monitoring for 3 days.

Result: In home monitoring, 10 adolescents reported normal blood pressure hence these 10 were diagnosed as having White coat hypertension

Conclusion: Prevalence of WCS among Adolescents is about 10%.

Abstract Topic: Complications

Abstract ID: 73

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Abstract Title: Diabetes, hypertension and musculoskeletal disorders:a love triangle

Background: Hypertension and diabetes go hand in hand with the number of cases of both rising exponentially. Insulin resistance and diabetes precipitate hypertension by activating the RAS-system, sympathetic-nervous-system and sodium-retention. High blood-glucose and raised BP cause oxidative-stress by impairing vascular smooth-muscle cells. This oxidative-stress is also responsible for development of musculoskeletal complications in type2-diabetics. These complications lead to decreased physical activity which is also a cause of development of HTN. Moreover, patients with obesity and prolonged type2-diabetes have more chances of developing hypertension. Type-2-diabetics with controlled BP show a decreased predilection towards cardiovascular and musculoskeletal complications.

Aim: To find out status/pattern of HTN in patients of type 2 diabetes mellitus with musculoskeletal disorders and non-diabetics with musculoskeletal disorders.

Methods: After informed consent, patients were recruited from orthopedic-OPD presenting with musculoskeletal complications commonly seen in type2-diabetics:adhesive-capsulitis, flexor-tenosynovitis, carpal-tunnel-syndrome, duyputrens-contracture and diabetic-cheiroarthropathy. All these patients were screened for type-2-diabetes using standard screening procedures:fasting, post-prandial blood-glucose, HbA1c. Patient's personal information and adequate history was taken along with blood pressure measurement. Based on history, BP and biochemical screening, 200 diabetic patients and 200 non-diabetic patients were recruited. In each group, distribution of each of musculoskeletal-complications was assessed along with blood-pressure in both the groups.

Result: Out of 400 study participants, 200 type-2-diabetics and 200 non-diabetics were segregated. In type-2-diabetics: Adhesive shoulder capsulitis was seen in 82 patients, tendinitis in 52 patients, duyputrens-contracture in 40, carpal tunnel in 22, diabetic-cheiroarthropathy in 4 patients. Average BP pattern for these patients was 152/98mmHg. Systolic BP 20-22mmHg and diastolic BP 10-12mmHg higher than the normal range. Moreover, females showed higher BP patterns than males in this group.

In non-diabetics:adhesive capsulitis seen in 38 patients, tendinitis in 10, duyputrens-contracture in 3, carpal-tunnel in 2 and no patients of diabetic cheiroarthropathy. Average BP pattern was 130/84mmHg. falling mostly in normal range with males showing higher BP values than females in general.

Conclusion: Both hypertension and diabetes should be diagnosed early and treated aggressively to prevent associated musculoskeletal, microvascular and macro vascular morbidity and mortality.

Abstract Topic: Basic Research

Abstract ID: 72

Author Name: Poonam Sahu, Dileep Kumar Verma

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Abstract Title: Depression in hypertension: a psychological challenge

Background: Globally, hypertension is becoming more common and is being poorly controlled, making it the biggest risk factor for cardiovascular illnesses. Numerous people who are diagnosed with hypertension frequently encounter difficult circumstances, including somatic symptoms, a poorer quality of life, and role impairment. In addition to all of these problems, they may be more susceptible to psychological distress, particularly depression. Additionally, stress has the ability to affect brain volume and is a known risk factor for the development of high blood pressure, CVD, and depression.

Aim: To evaluate the levels of depression faced by Hypertension patient.

Methods: This pilot study was conducted on 30 hypertensive patients between the age group of 30-65 years. The data were collected with the help of a patient health questionnaire (PHQ-9) which is a standard questionnaire to assess the level of depression.

Result: Result showed that 52 % hypertensive patient PHQ-9 scores ranges between 5-9 that shows mild depression while 21 % PHQ-9 scores around 10-14 that represent moderate depression and 6 % were found moderately severe depressed with PHQ-9 score between 14-19.

Conclusion: The majority of the hypertensive individuals had minor and moderate depression. It is crucial for healthcare professionals to employ effective defence strategies, such as developing psychological contact with patients, including family and friends as part of social support and empowering patients, and also needs to increase awareness, regular monitoring, and doctor consultation with regards to the full process of managing hypertension. A high sample size should be used for this study in order to obtain more accurate results.

Abstract Topic: Basic Research

Abstract ID: 71

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Abstract Title: A comparative study to assess blood pressure among tobacco users and non-tobacco users.

Background: Globally, the top two leading preventable causes of death are tobacco use and hypertension. Previous studies report that tobacco use alleviates blood pressure leading to increased risk of hypertension. Nicotine component of tobacco is to blame for increase in blood pressure levels.

Aim: The objective of this study was to assess the blood pressure of tobacco users and non-tobacco users as well as to compare their results.

Methods: In this study, we recruited the subjects from outpatient department (OPD) of KGMU. Total 80 subjects, 40 cases (tobacco users) and 40 controls (non-tobacco users) were enrolled in the study and their blood pressure as well as heart rate were assessed.

Result: Age group is approximately similar in cases and controls. Systolic BP shows significant changes ($p=0.005$) in tobacco users when compared to non-tobacco users. Diastolic BP shows slight changes in Mean±SD i. e., 84.00±9.7 mmHg and 81.70±9.7 mmHg in tobacco users and in non-tobacco users respectively but it is not statistically significant ($p=0.311$). Heart rate also shows significant increase ($p=0.04$) in tobacco users when compared to non-tobacco users.

Conclusion: Study concluded that tobacco use causes an acute increase in blood pressure and heart rate. Thus, tobacco cessation should be promoted as an essential public health practice for hypertension management.

Abstract Topic: Hypertension in Young

Abstract ID: 70

Author Name: Qulsoom Naz, Narsingh Verma, M Serajuddin, Abbas Ali Mahdi

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Abstract Title: Alpha Adducin gene polymorphism is more common in Male as compared to Female in essential hypertensive patients.

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.

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

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.

Result: Clinical and anthropometric parameters (such as SBP, DBP, FBG, height, weight, Lipid Profile, 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 female ($p=0.06$) and male ($p=0.04$). In case of essential hypertensive patients, male population showed a highly statistically significant ($p=0.03$) difference in GT & TT allele frequency in alpha adducing gene polymorphism.

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 Male patients.

Abstract Topic: Epidemiology

Abstract ID: 69

Author Name: Jigyasa Gupta, Bal Kishan Gupta, Nitesh Kumar Garwa, Gurmeet Singh

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Abstract Title: Prevalence of hypertension and Pre-Hypertension in Young Adults (18-35 years) in Bikaner North-West zone of Rajasthan.

Background: Hypertension is most important and modifiable cardio-vascular risk factor.

Aim: To evaluate prevalence of Hypertension and Pre-Hypertension in young adults

Methods: Blood pressure measurement was done as per protocol by organizing camps in various parts of Bikaner, North-West zone of Rajasthan.

Result: Results are shown in table:

SN	Parameter	Total cases	(%)	No (%)	No (%)	No (%)	No (%)
			Known HT	New Detected	Total HT	Pre-HT	NO-HT
1	Total No of cases	4144 (100)	143 (3.45)	290 (6.7)	433 (10.45)	1147 (27.68)	2564 (61.87)
2	***Sex***						
	Male	2156 (52.03)	87 (4.04)	208 (9.65)	295 (13.68)	726 (33.67)	1135 (52.64)
	Female	1988 (47.97)	56 (2.82)	82 (4.12)	138 (6.94)	421 (21.18)	1429 (71.88)
3	***Education***						
	Illiterate	790 (19.06)	26 (3.29)	38 (4.81)	64 (8.10)	169 (21.39)	557 (70.51)
	Undergraduate	1507 (36.37)	39 (2.59)	108 (7.17)	147 (9.75)	361 (23.96)	999 (66.29)
	Graduate	1500 (36.20)	65 (4.33)	119 (7.93)	184 (12.27)	514 (34.27)	802 (53.47)
	Postgraduate/ Professional	347 (8.37)	13 (3.75)	25 (7.21)	38 (10.95)	103 (29.68)	206 (59.37)
4	***Occupation***						
	Student	941 (22.71)	8 (0.85)	53 (5.63)	61 (6.48)	263 (27.95)	617 (65.57)
	Job	610 (14.72)	24 (3.93)	61 (10)	85 (13.93)	226 (37.05)	299 (49.02)
	Labour	203 (4.9)	7 (3.45)	10 (4.93)	17 (8.37)	61 (30.05)	125 (61.58)
	Farmer	236 (5.69)	5 (2.12)	20 (8.47)	25 (10.59)	65 (27.54)	146 (61.86)
	Teacher	31 (0.75)	2 (6.45)	0	2 (6.45)	6 (19.35)	23 (74.19)

	Clerk	431 (10.40)	35 (8.12)	53 (12.3)	88 (20.42)	156 (36.19)	187 (43.39)
	Businessman	36 (0.87)	3 (8.33)	5 (13.89)	8 (22.22)	12 (33.33)	16 (44.44)
	Doctor	71 (1.71)	10 (14.08)	7 (9.86)	17 (23.94)	39 (54.93)	15 (21.13)
	Advocate	25 (0.60)	2 (8)	4 (16)	6 (24)	10 (40)	5 (20)
	Professional	125 (3.02)	2 (1.6)	13 (10.4)	15 (12)	42 (33.6)	68 (54.4)
	Driver	61 (1.47)	2 (3.28)	10 (16.39)	12 (19.67)	16 (26.23)	33 (54.1)
	House wife	1374 (33.20)	58 (4.22)	58 (4.22)	116 (8.43)	244 (17.73)	1014 (73.69)
5	***Residence***						
	Urban	2470 (59.60)	98 (3.97)	196 (7.94)	294 (11.90)	751 (30.40)	1425 (57.69)
	Rural	1674 (40.40)	45 (2.69)	94 (5.62)	139 (8.30)	396 (23.66)	1139 (68.04)
6	***Alcoholic***						
	Yes	361 (8.71)	12 (3.32)	37 (10.25)	49 (13.57)	141 (39.06)	171 (47.37)
	No	3783 (91.29)	131 (3.46)	253 (6.69)	384 (10.15)	1006 (26.59)	2393 (63.26)
7	***Tobacco***						
	Yes	1054 (25.43)	41 (3.89)	89 (8.44)	130 (12.33)	279 (26.47)	645 (61.2)
	No	3090 (74.57)	102 (3.30)	201 (6.50)	303 (9.80)	868 (28.09)	1919 (62.10)
8	***Diabetes Mellitus***						
	Yes	62 (1.5)	17 (27.42)	6 (9.68)	23 (37.10)	11 (17.74)	28 (45.16)
	No	4082 (98.50)	126 (3.09)	284 (6.96)	410 (10.04)	1136 (27.83)	2536 (62.13)

Conclusion: Hypertension and Pre-Hypertension are found to be highly prevalent in all groups of young adults. There is a need for public health program to prevent and control hypertension in young adults

Abstract Topic: Paramedical Science

Abstract ID: 68

Author Name: Sachin Dwivedi, S K Tripathi, Rashmi Dwivedi, Jaya Sharma

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Abstract Title: Knowledge of blood pressure measurement techniques among Nurses: A cross-sectional survey in North & Middle India.

Background: Nurses play a significant role in the prevention & treatment of hypertension. One of the key responsibilities is to measure blood pressure in the hospital setting. Evidence-based information has shown that inaccurate measurement of BP often contributes to large numbers of individuals as hypertensive. Precise measurement of BP relies on knowledge and skill and is considered first and foremost in the management of cardiovascular problems. There seems to be limited information among nurses in North & Middle India regarding the precise measurement of BP when using a sphygmomanometer.

Aim: 1. To determine nurses' knowledge of blood pressure measurement techniques.

2. To find out the association between nurses' level of knowledge with selected demographic variables.

Methods: A cross-sectional descriptive design was adapted with the survey method in the North & Middle region of India with a total of 393 samples using purposive sampling. The investigator determined nurses' knowledge of blood pressure measurement techniques by using a questionnaire with Internal consistency of 0.67.

Result: he mean score of Nurses' knowledge was 9.28 and the majority of nurses had an average level of knowledge which was 66.15%. There were significant associations found between the level of knowledge and with Highest qualification (P<.00001), Type of healthcare setting (P.013757), Area of work (P<.00001), how long have you been measured BP (P <.00001) and read guidelines recently (P <.000078) at p<.05.

Conclusion: Although the average scores were 66.15%. for knowledge, this study identified deficits in knowledge. Periodic updates and using protocols and guidelines for BP measurement techniques could support the training and improvement of nurses' knowledge. Educational preparation that is more comprehensive may also greatly contribute to more understanding of BP measurement techniques.

Abstract Topic: Technology in Hypertension

Abstract ID: 67

Author Name: Suhas Kalashetti, Hemant Kokane, Venkatesh Somalaram, Suhas Patil

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Abstract Title: prospective evaluation of digital therapeutics enabled intervention on blood pressure control in indian patients with uncontrolled primary hypertension.

Background: Poor treatment compliance and bad lifestyle characteristics are often associated with uncontrolled primary hypertension. These modifiable risk factors can be addressed by technology-based solutions such as Digital Therapeutics (DTx) to improve the disease outcomes.

Aim: Test the effectiveness of novel digital therapeutics-enabled hypertension management program in controlling blood pressure.

Methods: A prospective, pre and post-intervention, open-label study, with statistical sample size of 125 subjects was planned at multiple centers in Pune. Patients with uncontrolled hypertension (>140 mmHg systolic or >90 mmHg diastolic) in the age group of 30-65 years, under stable treatment were enrolled. Subjects consented to participate in a 12-weeks DTx intervention program by Phable Care, as a supplement to their regular anti-hypertension treatment.

Result: Total 102 patients have completed the trial till date, with mean age of 47 ± 9 years, mean BMI of 27.2 ±4.7 kg/m^2 and 47% male patients. Mean change in systolic BP was -28 mmHg (155.6 ± 11.3 mmHg vs 127.3 ± 12.5 mmHg) (P<0.001) and -19 mmHg (100.7 ± 11.3 mmHg vs 82.1 ± 9.5 mmHg) (P<0.001) for diastolic BP after completion of 12-weeks intervention program. Patients with stage 1 hypertension (67.6%) achieved mean systolic reduction of -23 ± 5 mmHg while patients with stage 2 (28.4%) and stage 3 (3.9%) hypertension achieved mean systolic reduction of -37 ± 9 mmHg and -61 ± 8 mmHg, respectively. A total of 82.4% patients achieved the ESC/ICMR recommended goal of blood pressure <140/90 mmHg. Also, 27 subjects (26.5%) with other chronic comorbidities achieved a mean systolic BP reduction of 29mmHg.

Conclusion: The implementation of Phable Care's Digital therapeutic application, integrated with primary healthcare, was effective in reducing blood pressure in patients with uncontrolled hypertension. Thus, DTx intervention with pharmacotherapy is a useful approach to reduce hypertension prevalence and long-term cardiovascular risks.

Abstract Topic: Pharmacological Management

Abstract ID: 66

Author Name: Raj Kumar Gupta

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Abstract Title: Role of ARNI in the Management of Hypertensive Heart Failure Management

Background: A large proportion of patients with longstanding hypertension ultimately leads to heart failure (HF) and several epidemiological studies evinced the presence of hypertension as a co-morbidity in patients with heart failure. In the Framingham Heart Study (FHS) cohort, hypertension antedated the development of HF in 91% of all newly diagnosed patients during up to 20 years of follow-up.

Aim: To review the role of on the management of hypertensive heart failure.

Methods: We reviewed the published available evidences on the role of conventional therapies and ARNI (angiotensin receptor-neprilysin inhibition) in managing patients with hypertension-induced left ventricular hypertrophy.

Result: Most antihypertensive drug classes when used as initial therapy decelerate the transition from hypertension to HF, although not all of them are equally efficacious. Modest regression of the Left Ventricular Hypertrophy (LVH) has already established in small-scale studies with standard anti-hypertensive agents (ACEi and ARBs). ARNI is a dual inhibitor that acts on the renin-angiotensin (RAAS) and natriuretic peptide systems. Concomitant ARB and neprilysin-inhibitor (sacubitril/valsartan 200 mg once daily) were more effective than an ARB (olmesartan 20 mg once daily) alone in lowering ambulatory and office BP. An angiotensin receptor-neprilysin inhibitor (ARNI) has been recently approved for the treatment of hypertension in some countries. The use of ARNI in the treatment of hypertension will probably further improve cardiovascular protection and prevention in hypertensive patients.

Conclusion: Hypertension is the most powerful risk for these functional and structural cardiac lesions. The use of ARNI in the treatment of hypertension will probably further improve cardiovascular protection and prevention in hypertensive patients. Sacubitril–valsartan is documented to improve outcomes in apparent resistant hypertension in patients with HFpEF and an ongoing RCT (REVERSE-LVH) is currently evaluating the role of ARNI in ventricular remodeling in patients with hypertension.

Abstract Topic: Pathophysiology

Abstract ID: 65

Author Name: Dhiraj Kumar Gaurav, Sparsh Anil, Awadhesh Sharma, Mahmodullah Razi

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Abstract Title: to study significance and correlation of serum leptin level in essential hypertension

Background: The aetiology of essential hypertension is not completely elucidated yet. Studies strongly indicate that several factors including genetic, environmental and endocrine factors

Aim: Estimation of serum leptin levels in essential hypertension and comparision of serum leptin levels in overweight and normal weight hypertensive patients

Methods: Total 200 subjects were included in the study 100 were cases and 100 were controls. Among these, they were divided into four subgroups. A: Overweight hypertensives, B: normal weight hypertensives, C: overweight normotensives, D: normal weight normotensives.

Serum leptin estimation was performed with the LEPTIN ELISA, Diagnostics Biochem Canada Inc. Normal leptin levels: For women: 3.7 – 11.1 ng/mL and for men: 2.0 – 5.6 ng/mL.

Result: The age of the subjects included in the study was more than 18 years. M:F ratio among case and control was 50:50. Mean BMI among normal weight cases was 19.92 and among overweight cases was 33 (p: <0.0001). Smoking history was more prevalent among cases (28%) compared to controls(6%) (p: 0.006). Tobacco consumption was

more prevalent in cases (50%) compared to control (12%). In cases mean SBP was 153.52 and DBP was 96.04 and in control mean SBP was 115.16 and mean DBP was 75.36. SBP and DBP was significantly higher in case (p: <0.0001). The mean leptin value in case was 37.52 ng/mL and in control was 7.14 ng/mL. There existed significant difference between the two groups (p<0.0001). The mean leptin value in normal weight case was 12.49 ng/mL and in overweight case was 62.54 ng/mL. There existed a significant difference between the two groups (p <0.0001).

Conclusion: The above result shows that serum leptin was significantly higher in hypertensives and among hypertensives it was significantly higher in overweight compared to normal weight

Abstract Topic: Complications

Abstract ID: 64

Author Name: Mugdha Awasthi, Smita Gupta, MP Rawal, Bhawit Saraswat

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Abstract Title: Progressive multifocal leucoencephalopathy in HIV/AIDS: Observational study from a tertiary care centre in Rohilkhand region

Background: Progressive multifocal leukoencephalopathy (PML) is a demyelinating disease of the central nervous system, caused by the polyomavirus JC and occurring almost exclusively in the context of severe immune depression. It is a rare but debilitating and frequently fatal viral disease. The disease was relatively obscure until the outbreak of HIV/AIDS, when it presented as one of the more frequent opportunistic infections in this immune deficiency syndrome. Little is known about the epidemiology and disease course of these patients from India

Aim: To determine the features of PMLE in patients with HIV/AIDS

Methods: A prospective study was done of HIV infected patient who was diagnosed with Progressive multifocal leucoencephalopathy in Shri Ram Murti Institute of Medical Sciences. We recorded information on clinical features, microbiological & virological analysis & neuroimaging

Result: Result showed that the patient presented late to access the treatment with advanced immunosuppression along with low CD4 counts at presentation.

Conclusion: PML remains a significant concern for individuals with compromised immune systems regardless of their medical history. Advances in HIV infection treatments considerably reduced incidence of PML in this population. However, HIV+ patients with PML still face poor outcomes and is associated with high morbidity and mortality despite institution of highly active antiretroviral therapy (HAART).

Abstract Topic: Hypertension in Young

Abstract ID: 63

Author Name: Sugandha Jauhari, Pratyaksha Pandit, Anamika Chandra, Anurag Pathak

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Abstract Title: Prevalence of Hypertension Among Adolescents (10-19 Years) In India: A Systematic Review and Meta-analysis

Background: Noncommunicable diseases (NCDs) are emerging as an important public health problem in developing countries. The risk factors for NCDs are initiated during childhood and adolescence. Raised blood pressure is a leading risk factor for NCDs, which is responsible for 9.2% of DALYs for men and 7.8% of DALYs globally for women in 2015. The prevalence of hypertension among adults is estimated to be 31.1% globally and 27.6% in India. With increasing prevalence, hypertension is becoming a rising health problem not only in adults, but also in children and adolescents.

Aim: To do systematic review of studies and calculate the pooled prevalence of Hypertension in India

Methods: The search engines used were PubMed/Medline and PubMed Central, Embase, Google Scholar, Scopus, and grey literature which included cross-sectional studies reporting data on hypertension prevalence among 10 to19 years old from India and published in English language from 2010 onwards till date. Modified New castle Ottawa scale was used to assess risk of bias in the methodology of the studies. Metanalysis was done using the Rev Man software. A random effects model was used to estimate pooled prevalence, and heterogeneity was assessed using chi square test and I2 statistic. Publication bias was assessed by Eggers's test and Funnel plots. Grade analysis was used to determine the quality of evidence.

Result: Out of 28 studies (pooled sample of 29, 342 participants) eight studies were of high, eighteen of moderate, and two were of low quality. The prevalence of hypertension across studies ranged from 2.3% to 21.3%, with a pooled estimate of 7.78% (95% CI: 6.13 to 9.14%), with I2 = 68.2% (p-value <0.001) indicating substantial heterogeneity.

Conclusion: The pooled prevalence of hypertension among adolescent in India was 7.78% with substantial heterogeneity between the studies. To tackle the rise in burden of Hypertension among adolescents, early screening followed by health and nutrition intervention in schools for sensitization of the youth should be included in their policies.

Abstract Topic: Pharmacological Management

Abstract ID: 62

Author Name: Husain Haider Abbas, Anjum Parvez

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Abstract Title: Evaluation of compliance of anti-hypertensive treatment among patients presenting with hypertensive crisis to the emergency department of a tertiary care hospital in North India

Background: Hypertensive crisis is defined as systolic BP >180 mmHg or diastolic BP >120 mmHg. It includes hypertensive urgency and hypertensive emergency, depending upon end-organ injury. It includes neurological, renal or cardiac damage. Diet control, physical activity and treatment compliance is necessary to prevent hypertensive crisis. Frequent episodes of hypertensive crisis lead to poor outcomes, increased morbidity, mortality and wasteful expenditure.

Aim: To assess antihypertensive medication adherence of adult patients presenting to emergency department with hypertensive crisis at a tertiary care hospital in North India. To determine the reasons for non-compliance in these patients.

Methods: A cross-sectional study of adult hypertensive patients presenting to the emergency department with hypertensive crisis was conducted in the month of July 2022. The patients who were on antihypertensive medication for at least 6 months were included. A standardized questionnaire for assessing treatment adherence was used for the collection of data.

Result: A total of 110 adult hypertensive patients were assessed. The mean age of the patients was 45.9+/-10.8 years; 66% male, 34% female. The predominant presenting features were headache, vertigo, palpitations, anxiety, sweating or recording of false high blood pressure by automated measuring apparatus at home. Among them only 20% had good adherence, 55% showed partial adherence and 25% had stopped taking medication.45% patients informed that they skip medication when home BP reading is normal.30% patients forget medication while travelling.25% patients have switched to alternative treatment modalities.

Conclusion: Treatment adherence to anti-hypertensive medication was found to be sub-optimal. This highlights the need for regular compliance assessment to increase adherence and reduce drug dropouts. This can be achieved by patient education through individual counselling, group counselling, awareness campaigns and involving family members in the overall care of the patient. Adherence improves long-term outcomes more than any specific anti-hypertensive treatment.

Abstract Topic: Comorbidities

Abstract ID: 61

Author Name: Aakriti Kumar, Shailendra Sompura

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Abstract Title: NT-pro BNP Plasma Level and Tissue Doppler to Assess the Left Ventricular Diastolic Function in hypertensive patients.

Background: Natriuretic peptide (NT-proBNP) is released from myocyte granules in a condition of increased cardiac wall-stress in heart failure patients, and its plasma level elevation had been widely used as a parameter of diagnosis, functional class, treatment monitoring and prognostication. [1] Pulsed-wave tissue Doppler velocities of mitral annulus (Tissue Doppler Imaging/TDI) currently known could detect move-ment changes of cardiac wall in HF patients. [2]

Aim: diastolic function in a subset of hypertensive patients and evaluated the correlation between mitral annular TDI velocities & plasma level of NT pro BNP and its predictive cutoff value to diagnose LV diastolic dysfunction.

Methods: After full clinical examination, we measured NTproBNP, assessed LVH by ECG, ECHO. We measured LVEF, Left atrial diameter, left ventricular geometry and assessed LV diastolic function by mitral flow pattern & mitral annular TDI parameters, in 50 Hypertensive asymptomatic patients with EF (> 50%) and 30 healthy control subjects from the OPD of RMCH HAPUR

Result: We found that EA velocities were decreased in hypertensive group with diastolic dysfunction. Moreover, E/EA ratio was higher in hypertensive group in 34 patients out of 50. The E/Ea was significantly & directly correlated with the level of NT pro BNP in 39 patients out of 50. The powerful predictors of NT pro BNP level in hypertensive patients with diastolic dysfunction were E/Ea), LVMI and duration of hypertension Moreover, the powerful predictor of concentric LVH geometry is the duration of the hypertension.

Conclusion: Combination of tissue Doppler parameter and NT pro BNP plasma level offers a new strategy of risk stratification in hypertension. NT pro BNP is a promising marker to detect the subclinical state of heart failure with normal ejection fraction especially in hypertensive patient with diastolic dysfunction. Elevated plasma NT-proBNP levels correlates strongly with declining velocities of TDI early diastolic emcomponent in HF patients.[3]

Abstract Topic: Comorbidities

Abstract ID: 60

Author Name: Sahil Mittal, Gagan Saxena, Shailendra Saxena

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Abstract Title: Hypertension-a leading cause for heart failure

Background: Hypertension ranks as the most prevalent modifiable risk factor for premature cardiovascular disease and cardiovascular mortality and requires constant surveillance to identify complications and slow their development. Prolonged hypertension promotes left ventricular hypertrophy which will eventually lead to heart failure (both systolic and diastolic).

Aim: The purpose of the study was to determine the clinical features of cardiac failure in hypertensive patients, associated risk factors and co-morbidities in a group of 100 consecutively hospitalized hypertensive patients.

Methods: In all the patients we performed clinical examination, ECG, laboratory tests, X-ray studies, ultrasonography abdomen, and transthoracic 2-D echocardiography. The diagnosis of heart failure was established according to ESC guidelines.

Result: Of the 100 patients, 32 (32%) presented clinically manifest chronic heart failure or asymptomatic left ventricular dysfunction. The age of these patients ranged from 33 to 84 years (mean age 56.9

years). Of the 32 patients, 13 were men (40.62%) and 19 women (59.38%).24 patients (75%) had at least one comorbidity and 8 patients (25%) had multiple co-morbidities. These co-morbidities were renal dysfunction, overweight and obesity, dyslipidemia, chronic obstructive pulmonary disease, gout, anaemia, diabetes mellitus, atrial fibrillation, stroke and ischaemic heart disease.

Conclusion: Heart failure is common in patients of hypertension and is often associated with other co-morbidities. Hypertensive patients should be monitored by the family doctor regarding symptoms of heart failure (exertional dyspnoea, leg edema, etc.) and referred to cardiological evaluation, including echocardiography. Echocardiography should be performed in all hypertensive patients, especially if they have co-morbidities, for early diagnosis of asymptomatic ventricular dysfunction.

Abstract Topic: Hypertension in Women

Abstract ID: 59

Author Name: Sahil Mittal, Gagan Saxena, Mansi Aggarwal

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Abstract Title: A case report of PRES in Hypertensive Term female.

Background: Posterior reversible encephalopathy syndrome (PRES) is a clinico-radiological entity described by Hinchey et al in late 90's, characterised by variable associations of seizure activity, consciousness impairment ranging from confusion to coma, headaches, visual abnormalities, nausea/vomiting and focal neurological signs. [1] Its recognition has improved markedly over the last few decades with the increased availability of magnetic resonance imaging (MRI). [2] Patients with severemanifestation of PRES may get admitted to the Intensive Care Unit (ICU) due to coma or status epilepticus. [3]

Aim: To provide clinicians with guidance for diagnosing and treating patients with PRES.

Methods: Case Report

Result: A 29-year-old primi k/c/o hypertensive disease of pregnancy presented with complaints of generalized tonic clonic seizures following acute onset of headache. On arrival patient was unconscious responding to pain stimulus with GCS 6/15, pedal edema and blood pressure of 190/110 mmHg with right sided hemiparesis. On auscultation bilateral basal crepts present. Elevated D-dimer and urine analysis with albumin of 3+. Casearian section was done and baby shifted to neonatal intensive care unit with the birth weight of 2.63kg. She was managed in ICU with magnesium sulfate therapy, labetolol, furosemide and mannitol along with central venous pressure monitoring. Fundus revealed bilateral papilledema. MRI brain was done which is showing small lacunar hemorrhagic infarct in left posterior parietal region. She weaned out from ventilator after 5 days for proper management, maintained on air saturation of 100% with significant neurological recovery and shifted to ward.

Conclusion: The incidence of PRES is unknown and has been reported in young to middle-aged adults with female predominance. common causes are accelerated hypertension, eclampsia, preeclampsia, cytotoxic drug use and autoimmune diseases like systemic lupus erythematosus. [1]In severecases, aggressive supportive care in the intensive care unit (ICU) is required. [4]Regardless of the underlying cause, the main abnormality is cerebral vasogenic edema.

Abstract Topic: Complications

Abstract ID: 58

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Abstract Title: Effect of advanced age on bioactive factors (IL-6& TGF-beta) in colostrum

Background: Inflammation is a known phenomenon describing age-related increase in inflammatory markers in blood and hence advanced age pregnancy may be affected by it. There is documented association of serum inflammatory markers with breast milk and colostrum.

Aim: To study the effect of advanced age on IL_6and TGF-beta in colostrum.

Methods: In this case _control study, colostrum specimens were collected from 28 lactating mothers aged mere than 35years (cases) and were compared for bioactive factors (IL-6&TGF-beta)levels with 28 lactating mothers aged 18-30years(controls). Those with history of chronic illness, systemic illness(DM, Hypertension)and endocrine disorders or on any confounding medication were excluded from the study. Obstetric history was noted. IL-6and TGF-beta levels in colostrum were assessed using ELISA. Data was compared using Independent samples 't'- test.

Result: Mean age of cases and controls was36.98+-1.57and25.61+-3.15years respectively (p=less than0.001). No significant difference between two groups was observed for time of specimen collection after delivery (P=0.254). median parity of cases was significantly higher as compared to that of controls(2vs1;p=0.003). Mean colostrum IL-6levels in cases were 128.54+-63.02pg/mL as compared to98.10+-80.15pg/mL in controls (p=0.120, NS), however, meanTGF-beta levels were significantly higher in cases (29.10+-31.47pg/mL)as compared to that of controls(12.76+-3.16pg/mL)as compared to that of controls(p=0.008). Also, there is persistency of pro-inflammatory cytokines in the mature milk of mothers who developed high BP during delivery.

Conclusion: Both IL-6andTGF-beta levels were higher in colostrum specimens of mothers in advanced age as compared to those aged less than and equal to 30 years and this difference was significant statistically forTGF-beta levels. It may be postulated that advanced maternal age could affect the colostrum pro-inflammatory cytokine levels. Studies on larger sample size targeted to study these differences and their clinical impact on post-natal life should be planned.

Abstract Topic: Epidemiology

Abstract ID: 57

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Abstract Title: Survey of anthropometric and various socio-economic factors related to hypertension across diverse social groups in North India.

Background: A study of the socio-economic factors affecting blood pressure

Aim: To find the relation & effect of various socio-economic factors influencing blood pressure.

Methods: 800 primary hypertensives (18-60 years) were studied in Medicine OPD, KGMU, Lucknow. Anthropometric measurements, 3 readings of blood pressure were taken in each arm (right and left) from OMRON BP monitor and average was calculated. Patients with Systolic Blood Pressure (SBP) >= 130 mmHg, Diastolic Blood Pressure (DBP) >= 80 mmHg were enrolled. A sociodemographic, medical history proforma and Goldberg questionnaire (for depression)was filled. Living standards - place of residence (low/ high population density), village/city, colony/individual house/ apartment/multi-storeyed building, park nearby/ no, living with family/alone, vegetarian/ not, meal timings, alcohol & or tobacco intake, physical activity, meditation/yoga, office hours, self-driving/ not, marital status, time spent on social media, exposure to artificial light, online gaming, frequency of fasting, pets, leisure hours, per month income, medical history, duration and quality of sleep was recorded.

Result: 73.4 % hypertensive males, hypertensive females 27.6%.55.60% patients were on medication.32.34% had uncontrolled SBP (>140 mmHg).8.06% with uncontrolled DBP (>90 mmHg). Age, BMI, male gender, < 7 hrs / week physical activity, individual houses, alcohol consumption, unemployment, depression, playing online games > 5 hrs/ week, not being in a relationship, living in high population density area were significantly associated ($p < 0.05$) with hypertension. Education level, exposure to artificial light <10 hrs/day, contentment with life, living in a low population density area, yoga/ meditation(3 hrs/week), at least 12 leisure hours/ weekend, 3 hours deep sleep per day, significantly reduced worsening of hypertension.

Conclusion: This is the first of its kind study in Indian hypertensives.

Abstract Topic: Pharmacological Management

Abstract ID: 56

Author Name: Kamireddy Siva Prasad Reddy, Rutu hitesh karia, Nitika agrawal, Pankaj singla

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Abstract Title: The ARNI's Victory in Hypertensive Patients

Background: Every one of the four hypertensive patients was found to have inadequately controlled values of blood pressure despite being on standard anti-hypertensive regimens. This alarms the availability of treatment options that targets the basis of hypertension. Pluripotent drug sacubitril/valsartan (SV), a first-in-class dual action molecule angiotensin-receptor-neprilysin-inhibitor(ARNI), has been of significant importance in the patients with resistant hypertension(RH).

Aim: To examine the effect of combined therapy of angiotensin-receptor inhibitor (Sacubitril (S)) and neprilysin inhibitor (Valsartan(V)) in patients with "apparent resistant hypertension".

Methods: A prospective-cohort study was conducted for eight weeks. The study subjects recruited in this study were chosen from among the patients visiting out-patient department (OPD). "Apparent resistant hypertension" was defined as systolic blood pressure (SBP) ≥140 mmHg despite being on at least three first-line antihypertensive drugs, one of which should be a diuretic.57 hypertensive patients of age ≥35 years were screened for apparent resistant hypertension as per definition, of which 14 patients were included, started on SV 100mg twice a day and followed for eight weeks.

Result: The SV regime showed to significantly lower the mean sitting systolic blood pressure. After four weeks, the SBP reduced from 158.4± 8.6 to 146.6± 7.3 mmHg, while at the end of eight weeks, SBP was maintained at 138.6± 7.0 mmHg. The DBP was reduced from 85.7± 7.2 mmHg at baseline to 79.2± 8.0 mmHg at the end of week four, which maintained stable at week eight (77.8± 8.7 mm Hg). During the follow-up period, two patients were up-titrated to SV 200 mg twice daily. No drop-outs occurred, all patients completed the study.

Conclusion: Our study showed significant reduction in BP in RH patients while no serious adverse events were observed with the use of this combination therapy. Since management of RH is still challenging, a large-sized population study can prove such combinations better.

Abstract Topic: Basic Research

Abstract ID: 55

Author Name: Pankaj, Rutu Hitesh Karia, Kamireddy Siva Prasad Reddy, Nitika Agrawal

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Abstract Title: Isolated nocturnal hypertension as a determinant of masked hypertension

Background: Masked hypertension(MH) is not an uncommon entity. MH is also been recognized as significant risk-factor for cardio- and cerebrovascular diseases. Nocturnal along with 24-hours ambulatory blood pressure monitoring has increased our awareness about MH and studies have shown its effect on target organ damage. Thus, by using isolated nocturnal hypertension (INHTN) as a determinant to reveal MH, morbidity and mortality related to hypertension can be significantly reduced.

Aim: To study the role of INHTN as a determinant of masked hypertension.

Methods: A prospective-cohort study was conducted wherein 126 participants (aged 30 to 50 years) normotensive patients visiting OPD were chosen over one week and monitored for the next one week.

INHTN is defined as elevated night-time BP (≥120/70) but with normal daytime BP(<135/85). The patients were monitored day and night to find the average blood pressure values. Those found to have INHTN, were further screened for elevation in office BP and 24-hour ambulatory to reveal MH.

Result: In this study, 28 patients were found to have elevated nocturnal blood pressure. These patients were chosen for 24-hour ambulatory BP monitoring, the average of which was found to be higher than those with normotensive nocturnal readings. Surprisingly, the office BP in these patients was found to be normal. Thus, they were confirmed to have masked hypertension, i. e. prevalence of INHTN in individuals with masked hypertension (MH) was 22.22%. Rest 98 patients with normotensive nocturnal readings were found to have lower average 24-hour ambulatory BP.

Conclusion: Our study showed a significant role of INHTN as a major determinant of MH. Our study suggested that 24-hour ambulatory BP monitoring is a superior technique than measuring office BP. Many similar studies have suggested similar findings as this study. A study involving larger sample size is required to confirm the role of INHTN in MH.

Abstract Topic: Pharmacological Management

Abstract ID: 54

Author Name: Nitika Agrawal, Rutu Hitesh Karia, Pankaj Singla, Kamireddy Siva Prasad Reddy

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Abstract Title: Firibastat, the brainy anti-hypertensive therapy

Background: Resistant hypertension(RH) is defined as uncontrolled BP despite three first-line anti-hypertensive drugs one of which should be a diuretic. One of its causes is overactivation of brain renin angiotensin system (RAS). Firibastat(prodrug), a centrally-acting antihypertensive drug, inhibits brain RAS v/s other first-line anti-hypertensive that target systemic RAAS. Firibastat crosses blood-brain-barrier to be cleaved into two active metabolites i. e. EC33 inhibiting aminopeptidase-A(APA). APA converts angiotensin-II to angiotensin-III(AT III). AT-III inhibition causes alleviation of arginine-vasopressin(AVP) and sympathetic tone while increasing baroreflex function, thereby decreasing blood pressure.

Aim: To study the effect of Firibastat in patients with RH.

Methods: A literature search was conducted during the month of June 2022. Primary databases like WHO, PubMed, and Google Scholar were screened from January 1st 2015 to June 30th 2022 to extract four manuscripts. Studies reporting results on clinical trials conducted using Firibastat were included to study its effects.

Result: In phase-I trial(NCT01900171), 56 healthy-males were followed for 11 days to ensure safety and tolerance of the drug. No significant changes were noted in SBP and DBP, while only one subject reported orthostatic hypotension six hours after ingestion of Firibastat. In Phase-IIa(NCT02322450) three of 34 subjects experienced serious adverse effects like vestibular disorder, skin rash and arthralgia. In NEW-HOPE (Phase-IIb)(NCT03198793), a reduction in office SBP was seen by 9.5 mmHg and office DPB by 4.2 mmHg. Among obese people, SBP decreased by 10.2 mmHg, 10.5 mmHg among blacks and 8.9 mmHg among non-blacks. Erythema multiforme was reported in one patient.

Conclusion: Firibastat can be a groundbreaking drug based on the current knowledge and effects in clinical trials. The clinical trials have showed no severe adverse effects, while showing significant results in lowering BP. However, the safety and efficacy of firibastat should be further confirmed in patients with resistant-hypertension through a large-sized, and highly powered phase-III clinical trials.

Abstract Topic: Prevention

Abstract ID: 53

Author Name: Laxmikant Shukla

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Abstract Title: A study on Knowledge about Hypertension among hypertensive patients and practices of lifestyle changes

Background: Hypertension is one of the crucial risk factors for cardiovascular mortality. If lest uncontrolled, hypertension can lead to heart attack, eventually heart failure, kidney failure, blindness, and cognitive impairment. The world health organization (WHO) has estimated that cardiovascular disease alone will account for approximately 31% of global deaths in 2016. Improving knowledge about hypertension and awareness regarding lifestyle modification is of paramount importance to achieve desired results of better Blood pressure control

Aim: To know the knowledge status among hypertensive patients about the disease and the lifestyle changes they are practicing.

Methods: A Descriptive cross-sectional study conducted among 290 known hypertensive patients above 18 years of age attending OPDs at primary health care centres of Lucknow. A pretested semi-structured questionnaire was used to collect information on socio-demographic characteristics, knowledge about the disease and lifestyle changes they are practicing in their day to day life.

Result: Among 290 patients surveyed 8.6% belonged to age group of 18 to 36 years and 55% were female. Majority (53.1%) of the total study participants had limited knowledge about hypertension, 24.8% had poor knowledge about hypertension. Only 6.6% had good knowledge. Lifestyle changes practiced were mainly exercise and diet modification. Only 3.6 % of the total study participants were doing exercise for more than 30 minutes. None of the female study participants were doing exercise for more than 30 minutes.

Conclusion: Knowledge among the patients is a key element for good Blood Pressure control and practicing lifestyle changes.

Abstract Topic: Prevention

Abstract ID: 52

Author Name: Ginic Gupta

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Abstract Title: Opportunistic Screening for Hypertension and Selected Cardiovascular Risk Factors among Adults Attending an Urban Health Center in Lucknow, India

Background: India is heading towards Epidemiological transition. Non-communicable diseases are rapidly increasing in India, largely due to demographic and lifestyle changes. SDG targeted to Reduce 1/3rd premature mortality from NCDs by 2030 (SDG target 3.4).

Aim: The objective of the study was to measure the amount of undiagnosed hypertension and selected cardiovascular risk factors present among the adult population through opportunistic screening at the Urban Health Center Alambagh, Department of Community Medic

Methods: A facility-based opportunistic screening program is being carried out at a UHC in urban Lucknow, during June 2022 to August 2022. Patients and accompanying persons aged 30 years and above, who attended the daily outpatient department (OPD) were included. The OPD provides outpatient services and medical procedures or tests without requirement of an overnight stay, and functions for 4 h a day. Known hypertensive patients and pregnant women were excluded. Information on age, gender, diabetes status, and personal history of tobacco and alcohol use were collected using an interview schedule. Height, weight and BMI were measured, along with blood pressure using standard protocols. Systolic blood pressure (SBP) ≥140 and/or diastolic blood pressure (DBP) ≥90 mm Hg was taken as hypertension. SBP of 120-139 mm Hg and/or DBP of 80-89 mm Hg were taken as prehypertension.

Result: Awaited

Conclusion: Awaited

Abstract Topic: Hypertension in Women

Abstract ID: 51

Author Name: Arunima Saini

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Abstract Title: Pre-referral management of eclampsia and severe preeclampsia in women referred from lower-level healthcare facilities to a tertiary care hospital in Lucknow

Background: Eclampsia-related conditions are one of the leading direct causes of obstetric deaths in India and worldwide. Efforts to prevent such deaths in low- and middle-income countries are increasingly focused on strengthening the primary care level to enable frontline providers to screen and initiate treatment for women with severe preeclampsia, and eclampsia.

Aim: This study aims to determine the enforcement of diagnosis, management and description of the referral system of hypertensive disorders of pregnancy patients at lower-level health facilities before referring the patient to a higher centre.

Methods: This study used a descriptive design, carried out in the Queen Mary Hospital from October 2019-September 2020. The sample size was calculated using the W. Deniel formula, with 95% confidence interval, 2.5% margin of absolute error, and the least prevalent complication, p (Antepartum Haemorrhage=12.5%). The final sample size came out to be 675. All the women referred to Queen Mary Hospital for emergency obstetric complications during the antepartum, intrapartum and postpartum period from public health facilities comprise the study population. Systematic random sampling was done to select the study participants.

Result: There were 240 (35.5%) cases of Severe preeclampsia/Eclampsia from 675 total cases The antihypertensive drugs were given to about half of the cases, and MgSO4 was not given to 100% of cases before referral. There were 48/240 (20%) referral cases of Severe preeclampsia/Eclampsia, where the completeness of the tools and medicines was deficient and were referred without referral letters.

Conclusion: From the whole data, it was found that the pre-requisite conditions before referral had not been fulfilled properly. Referrals should be well prepared in order to achieve patient safety and to decrease maternal deaths.

Abstract Topic: Pathophysiology

Abstract ID: 50

Author Name: Raveesh N. Agarwal, Jagdish Narayan, N. S. Verma, S. K. Sonkar

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Abstract Title: Comparison of Heart Rate Variability between Chronic kidney patients(CKD) and apparently healthy adults

Background: Heart Rate Variability is a non invasive indicator of Autonomic Nervous System which can be easily and accurately recorded by ECG machine. Cardiovascular system complications (morbidity and mortality) are frequently reported in chronic Kidney patients. ANS dysfunction has been identified as contributing to the increased CVS complications in CKD pts.

Thus assessment of HRV parameters in CRF pts can reveal important clues regarding their ANS activity.

Aim: To compare HRV changes in CRF pts with that of apparently healthy adults.

Methods: HRV data of 25 CRF pts. From Medicine O. P. D. of K. G. M. U. and 25 apparently healthy age and sex matched adults were recruited for the study. The heart rate variability was recorded in supine position with 3 lead ECG (AD INSTUMENTS) for five minutes in physiology department of K. G. M. U. THE Data of various parameters of HRV were analyzed and result compared for statistical significance.

Result: The value of LF/HF RATIO which represents sympathovagal balance in HRV was significantly more in CKD patients in comparison to apparently healthy matched adults (P<0.05). This shows that there is significant ANS dysfunction in CRF patients. as compared to apparently healthy adults.

Conclusion: CKD causes changes in LF/HF ratio of HRV implying changes in both sympathetic and parasympathetic arms of ANS. This may be one of the pathophysiological causes of increased CVS complications in CKD patients.

Abstract Topic: Complications

Abstract ID: 49

Author Name: R Sushma Swaraj, Shraddha Singh, Sandeep Bhattacharya, Sumit Rungta

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Abstract Title: Non-invasive predictors of oesophageal varices in liver cirrhosis

Background: Oesophageal variceal bleeding is the most common cause of death in patients with liver cirrhosis. Hence repeated gastroendoscopy for detecting varices remains gold standard, but it increases social and medical burden in future due to greater number of patients with chronic liver disease. Hence identifying non-invasive predictors for oesophageal varices in liver cirrhosis patients provides a useful screening tool in various health care set ups.

Aim: To asses predictors of oesophageal varices by using non invasive markers in patients diagnosed with liver cirrhosis.

Methods: 109 patients with liver cirrhosis who were underwent clinical, biochemical evaluation, USG abdomen with spleen bipolar diameter and ascitic fluid analysis in patients with ascites is recorded. Upper GI endoscopic findings in all these patients for oesophageal varices and it's grade is being recorded. Hospital based cross sectional study done. We assessed APRI score, PC/SD and SAAG as non invasive predictors of oesophageal varices in cirrhotic patients.

Result: APRI score > 1.815 (p 0.01), SAAG > 1.1g/dL (p 0.006) and PC/SD ratio <= 909 (p 0.023) are statistically significant for oesophageal varices in liver cirrhosis. Order of prediction by applying ROC curves shows APRI score > PC/SD > SAAG. Within grading of varices APRI score has shown statistically significant value. APRI score of 1.9 to 2.5 having small oesophageal varices, and APRI score > 2.5 having large oesophageal varices.

Conclusion: APRI score > 1.815, PC/SD <= 909, SAAG > 1.1g/dL can be used as screening tool to predict oesophageal varices in liver cirrhosis. These predictors can be used in low health care centres where gastro endoscopic units are not available, also reducing cost of health care, lowers risk of invasive procedure in liver cirrhosis patients.

Abstract Topic: Basic Research

Abstract ID: 48

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Abstract Title: Association of renalase gene polymorphism in patients of hypertension with or without type 2 diabetes mellitus

Background: different etiologies of lifestyle disorders, genetic etiology is now well understood. Renalase gene polymorphisms have been shown to be associated with hypertension and diabetes separately with and without renal involvement. In present study an attempt was made to study the association of two polymorphisms (rs2576178 and rs2296545) of the renalase gene in patients of hypertension, with and without type 2 Diabetes mellitus and incipient nephropathy.

Aim: the association of two polymorphisms (rs2576178 and rs2296545) of the renalase gene in patients of hypertension, with and without type 2 Diabetes mellitus and incipient nephropathy.

Methods: A total of 80 hypertensive patients with diabetes mellitus, 80 hypertensives without diabetes mellitus and 80 age- and gender-matched controls were enrolled in the study. Five milliliters of blood was obtained from all the participants. Genomic DNA were isolated from collected blood using the phenol-chloroform DNA extraction method. Genotypes for two SNPs (rs2576178, rs2296545) in the renalase gene region were determined by the PCR–RFLP method. Genotypic expressions of the three groups were compared using Chi-square and Fisher exact test.

Result: were equal number of males and females. Heterologous rs2576178 genotype GA was significantly higher in hypertensive patients with diabetes mellitus (61.25%) as compared to that in hypertensive alone (35%) and controls (32.5%) respectively (p=0.002). For renalase gene rs2296545 genotype CC was more common in hypertensives with diabetes (47.5%) and hypertensives (37.5%) as compared to controls (23.75%) (p=0.

Conclusion: polymorphisms were significantly associated with hypertension with and without diabetes

Abstract Topic: Pharmacological Management

Abstract ID: 47

Author Name: Dr. Tanmay Rane, Sachin Suryawanshi, Mayur Jadhav, Hanmant Barkate

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Abstract Title: A retrospective study to evaluate real world evidence of azelnidipine in Indian patients (REDEFINE Study)

Background: Azelnidipine is a unique, long-acting, selective L-type calcium channel blocker that does not induce reflex tachycardia. Clinical studies have shown that azelnidipine is effective in lowering blood pressure (BP) and heart rate in hypertensive patients, however, evidence in Indian patients is lacking.

Aim: To evaluate the effectiveness of Azelnidipine in lowering BP in Indian patients with mild to moderate hypertension.

Methods: This was a retrospective cohort study that included patients of age 18 years or older whowere on azelnidipine for last 3

months for mild to moderate hypertension. A predesignedstructured proforma was used to collect information from the physicians to evaluateeffectiveness of Azelnidipine when prescribed as monotherapy or with otherantihypertensive drugs from their hospital records. This study was approved by SurakshaEthics Committee. The study evaluated change in BP from baseline to 12 weeks inoverall and diabetic population and proportion of patients achieving target BP <130/80and <140/90.

Result: The study enrolled 882 patients including 216 patients with diabetes. The average age

was 47.63± 12.43 years. There was a significant (p<0.0001) reduction in SBP (152.50±13.30 mmHg to 138.58±13.31 mmHg) and DBP (93.93±8.99 mmHg to 86.02±8.79 mmHg) from baseline to 12 weeks in overall population. There was also a significant (p<0.0001) reduction in SBP (149.27±12.87 mmHg to 133.92±11.88 mmHg) and DBP (92.73±8.53 mmHg to 84.04±7.38 mmHg) from baseline to 12 weeks in diabetic population. Overall study showed that in 44 (4.99 %) and 408 (46.26%) patients target BP of <130/80 and <140/90 was achieved respectively. Change in mean heart rate from baseline to 12 weeks was -5.22 beats /min.

Conclusion: Azelnidipine can be an effective anti-hypertensive drug for treatment of Indian patients with mild to moderate hypertension.

Abstract Topic: Pathophysiology

Abstract ID: 46

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Abstract Title: Sympathovagal balance in newly diagnosed drug naive copd subject

Background: The ambiguity of the physiological basis on which Chronic obstructivepulmonary disease (COPD) patients experience autonomic dysfunction is considerable. Inorder to understand the pathophysiology of COPD, insight into sympathovagal imbalance asa pathological phenomenon in COPD may be relevant and may have potential clinicalsignificance for enhancing risk stratification and the treatment of COPD patients. The presentstudy aimed to measure the sympathovagal balance in newly diagnosed drug naive COPDsubjects.

Aim: The aim of the present study is to measure the sympathovagal balance in newlydiagnosed drug naive COPD subject.

Methods: The study was done at Department of Physiology, King George'sMedical University, Lucknow. Total of 72 COPD cases and 72 controls as per inclusion-exclusion criteria were enrolled. After enrollment anthtropometric & demographic detailwere noted. HRV recording was obtained on an outpatient by Lab Chart Pro v8.1.10 andanalysed.

Result: The demographical parameter showed insignificant differences, however maledominancy was observed in both groups. The heart rate was significantly higher in cases(87.19±8.97) than controls (79.79±9.14). The deep breathing, response to standingsignificantly (p<0.0001*) lower than controls. The mean LF/HF ratio was significantly(p=0.0071*) higher in cases (0.99±0.95) than controls (0.67±0.29). However, Spearmancorrelation analysis between LF/HF ratios showed non-significant correlation with HR, deepbreath, blood pressure during handgrip, supine, and standing positions.

Conclusion: Sympathetic dysfunction increase significantly with the severity of COPD, however non-significant correlation were observed.

Abstract Topic: Prevention

Abstract ID: 45

Author Name: Azam Ali, Ajay Mishra, Jalees Fatima, Fakhare Alam Khan

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Abstract Title: Blood pressure variability in patients of metabolic syndrome with fragmented QRS versus normal QRS.

Background: Blood pressure variability (BPV) represents a strong and independent risk factor for cardiovascular diseases(CVD) and hypertension-related morbidity and mortality specially in patients of Metabolic Syndrome (MetS).24-Hours ambulatory BP monitoring (ABPM) allows insight into BPV's patterns and clinical significance. Presence of a narrowed Fragmented fQRS on ECG(fQRS), as an indicator of myocardial fibrosis, may be a sign of increased BP even in the absence of manifest LVH.

Aim: BPV in patients of MetS with fragmented QRS versus normal QRS.

Methods: 63 patients with MetS were included and divided into two groups with normal QRS (Group1) and with fQRS (Group 2)

Result: 46 (73.0%) patients had normal QRS, only 17 (27.0%) patients had fragmented QRS.

Mean Ejection fraction of Group 2 (46.65±13.11%) was lower as compared to Group 1 (57.72±3.61%) 2D Echo Abnormalities and CAD was more in Group 2 (58.8% & 94.1%) as compared to Group 1 (2.2% & 0.0%).

Significant differences were observed for Peak day time (110.47±15.54 vs.96.09±20.21 beats/min), Average day time (95.88±12.70 vs.84.98±17.59 beats/min) and Average night time (91.00±11.55 vs.81.65±16.14 beats/min). Minimum, Average and Peak systolic BP of patients of Group 2 were found to be higher than that of Group 1 at both day time as well as night time.

Majority of the Group 1 patients showed dipping in systolic BP (71.7%), extreme dipping was observed in 15.2% patients, no dipping in 8.7% and reverse dipping in 4.3% patients while majority of Group 2 patients showed extreme dipping in SBP (64.7%), dipping in 23.5%, non-dipping in 5.9% and reverse dipping in 5.9%.

Conclusion: Extreme dippers emerged as dominant index to differentiate MetS patients with higher cardiovascular risk (QRS fragmentation) from those with a relatively lower risk (non-fragmented). Blood pressure variability can be useful, easy and non-invasive measure to determine risk of cardiac event.

Abstract Topic: Prevention

Abstract ID: 44

Author Name: Saboor Mateen, Jalees Fatima, Zeba Siddiqi, Mohammad Zakariya

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Abstract Title: Study of newer cardiovascular risk markers (CT CAC and CIMT) in rheumatoid arthritis and controls.

Background: Patients with Rheumatoid Arthritis (RA) are at increased risk for cardiovascular diseases, including atrial fibrillation, stroke, and mortality. Atherosclerosis, manifests clinically in form of fatal or life-threatening cardiovascular events. Early atherosclerotic changes can be detected by Carotid intima-media thickness (CIMT) and Coronary artery calcium (CAC)

Aim: To study CT coronary artery calcium and CIMT as cardiovascular risk marker in patients of rheumatoid arthritis and controls and to see their correlation.

Methods: Present study (n=90) was done on 45 RA cases and 45 healthy controls in a Medical College of Lucknow

Result: Majority of patients had High disease activity (66.7%; DAS Score >5.2).

CAC score of majority of Controls indicated no evidence of CAD (CAC Score 0; 88.9%), rest had minimal risk (Score 1-10) or Mild risk (Score 11-100), none of the controls had Moderate risk (Score 101-400) and Severe risk (Score ≥401) on the other hand only 22.2% of rheumatoid arthritis had no evidence of CAD, another 22.2% had minimal risk, rest 55.5% had mild-severe risk of CAD based on CAC Scores.

Proportion of Cases was higher as compared to controls in all the CAC risk categories – Minimal (22.2% vs.6.7%), Mild (13.3% vs.4.4%), Moderate (24.4% vs.0.0%) and Severe risk (17.8% vs.0.0%). CIMT showed significant correlation with CRP and all Lipid parameters.

Level of correlation of CIMT with CRP was Strong. CAC score also showed significant correlation with CRP and Lipid Parameters.

Conclusion: There is a significant difference in CIMT and CAC levels of rheumatoid arthritis patients as compared to Controls. These surrogate markers of early atherosclerosis in rheumatoid arthritis patients may help in risk reduction strategies in this group of patients. Both CIMT and CAC have shown a concordance with some traditional CV risk factors like age and Dyslipidemia. The disease activity score also correlates with CIMT and CAC.

Abstract Topic: Basic Research

Abstract ID: 43

Author Name: Aniruddh Kumar Gupta, Manish Bajpai,Anil Nischal,Anupam Mishra

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Abstract Title: Comparative study of blood pressure variability in patients of Depression

Background: In patients of depression there is loss of interests, lack of energy and lack ofconcentration. Blood pressures recording in depressed subjects compared to the controlled group was found that there is more propensity of developing hypertension in depressed patients

Aim: To compare blood pressure variability in patients of depression with normal subjects.

Methods: ICD 10 classified 35 patients of depression and 32 normal subjects on spot (OPD, Psychiatry department, KGMU) blood pressure measurements was done by oscillatory automated bp machine.

Result: Average blood pressure in depressed patients was SBP/DBP 129/83 mmHg. Higher than normal persons average blood pressure SBP/DBP 125/76 mmHg.

Conclusion: : Depression increases the risk for hypertension. Further studies are needed for correct impact of depression on cardiovascular system 0 in depressed patients.

Abstract Topic: Basic Research

Abstract ID: 42

Author Name: Pratyaksha Pandit, Laxmi Kant Shukla,Monika Agarwal,Sugandha Jauhari

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Abstract Title: role of factors affecting continuum of care on status of blood pressure control among hypertnsive patients.

Background: hypertension is a vital public health challenge in both economically developing and developed countries. Current who projections reveal that 1.13 billion people worldwide have hyprtension but only <1 in 5 people have the problem under control. Ontinuum of care approach is an important tool that can provide crucial understanding into all stages of disease progression from prevention through to long-term care and would enable consolidation of efforts to control ncds.

Aim: to identify factors affecting continum of care and its role in control of blood pressure among hypertensive patients.

Methods: a descriptive cross-sectional study conducted among 290 known hypertensive patients above 18 years of age attending general opds at primary health centers of lucknow. A pretested semistructured questionnaire was used to collect information on socidemographic characeristics, treatment history, factors realted to continum of care. Blood pressure measurement was done at the time of interview.

Result: among 290 patients surveyed majority (49.3%) had stage 1 hypertension, 13.8% had stage 2 hypertension, 22.8% were in prehypertensive stage and 7.2% had isolated systolic hypertension. After adjusting for the confounders, the factors which came out to be significantly affecting the status of blood pressure were 'gender', 'no. Of drugs taken by patient', 'no. Of times ina day drug taken by patient', 'patient seen by same doctor in all visits', 'exercise/diet modification prescribed', 'getting prescribed medication free', 'time taken to meet doctor' and 'doctor-patient relationship'.

Conclusion: continum of care remarkably affects the status of blood pressure control of hypertensive patients.

Abstract Topic: Complications

Abstract ID: 41

Author Name: Divakar Mishra, Jalees Fatima, Vaibhav Shukla, Sunny Malde

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Abstract Title: Categories of albuminuria and its correlates in diabetic kidney disease with or without hypertension.

Background: Diabetes is a metabolic illness with considerably increasing global prevalence. Diabetic kidney disease (DKD) which is characterized by the increasing levels of albuminuria has become the most common cause of end stage renal disease. Recent studies suggest advent of non albuminuric diabetic nephropathy also. In this study, we aimed to determine the categories of albuminuria in Diabetic Kidney Disease with or without hypertension and to see its correlation with Renal Resistive Index, Ankle Brachial Pressure Index & Serum Uric Acid.

Aim: To determine the categories of albuminuria in Diabetic Kidney Disease wIth or without hypertension and its correlation with Renal Resistive Index, Ankle Brachial Pressure Index & Serum Uric Acid in a tertiary care centre in North India.

Methods: This study is a hospital based cross-sectional observational study in which 125 consecutive patients presenting to the medicine OPD with T2DM & nephropathy i.e., eGFR <60 were taken as study subject. Patient were divided on basis of categories of albuminuria, into Normoalbuminuric, Microalbuminuria or Macroalbuminuria. Finally a correlation of S. Uric acid, Renal Resistive Index (RRI), hypertension and Ankle Brachial Pressure Index(ABPI) was assessed with the categories of Albuminuria

Result:

- Based on spot urine, 32% of the patients had normoalbuminuria, 48% of the patients had microalbuminuria followed by 20% of the patients had macroalbuminuria.
- Almost similar SBP values were observed in A1 (130.5 ± 15.5 mmHg) and A2 (129.3 ± 14.5 mmHg) categories while HTN was more evident in macro-albuminuria category (146.8 ± 15.2 mmHg).
- There was a significant difference in terms of correlates like RRI (P=0.02) and ABPI (P=0.04) and hypertension when all the three categories were compared.
- There was a significant difference in values of eGFR (P<0.05) in A1 (58.8 ± 27.4), A2 (46.7 ± 23.8) and A3 categories (26.7 ± 9.9).

Conclusion: This study showed that microalbuminuria (48%) and macroalbuminuria (20%) are highly prevalent in DKD with hypertension patients. Duration of diabetes and presence of hypertension has significant correlation with microalbuminuria. The people who had microalbuminuria or macroalbuminuria had higher levels of creatinine, RRI, ABPI alongside systolic and diastolic blood pressure.

Abstract Topic: Basic Research

Abstract ID: 40

Author Name: Utkarsh Kimmatkar, Zeba Siddiqi, Jalees Fatima, Sana Sajid

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Abstract Title: Inter Arm Systolic Blood Pressure Difference in Type 2 Diabetic Patients as a marker of subclinical atherosclerosis.

Background: Inter Arm Systolic Blood Pressure Difference in Type 2 Diabetic Patients as a marker of subclinical atherosclerosis. Albuminuria &Carotid intima–media thickness are established markers of subclinical atherosclerosis and predispose to CVD

Aim: Inter Arm Systolic Blood Pressure Difference in Type 2 Diabetic Patients

Methods: A cross sectional study was carried out with 540 patients of type 2 diabetes mellitus (ADA criteria) attending the medicine OPD and indoor of ELMC&H. History and examination were performed after taking consent from the patients.

Out of 540 patients of type 2 diabetics mellitus, 52% patients were hypertensive, 60.2% had CIMT >0.6 mm and 78.6% had renal involvement in form of either microalbuminuria or macroalbuminuria.

All study patients were divided into two groups according to systolic IABPD.14 (3%) had IASBPD ≥10 mm Hg while 526 (97%) patients had IASBPD <10 mm Hg.

Result: Out of 540 patients of type 2 diabetics mellitus, 52% patients were hypertensive, 60.2% had CIMT >0.6 mm and 78.6% had renal involvement in form of either microalbuminuria or macroalbuminuria.

All study patients were divided into two groups according to systolic IABPD.14 (3%) had IASBPD ≥10 mm Hg while 526 (97%) patients had IASBPD <10 mm Hg.

Our result demonstrated that Mean CIMT of patients with interarm SBPD ≥10 mm Hg was higher as compared to those with interarm SBPD <10 mm Hg.

No significant association of IASBPD was observed with Albuminuria

Conclusion: The present study was aimed to evaluate possible use of inter-arm difference in systolic blood pressure as an indicator of atherosclerosis in high risk population and its correlation with other surrogate markers of subclinical atherosclerosis

Abstract Topic: Complementary Medicine & Others

Abstract ID: 39

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Abstract Title: To Study Pre And Post Percutaneous Coronary Intervention Blood Pressure Variability With Ambulatory Blood Pressure Monitoring In Patients With Stable vs Unstable Coronary Artery Disease

Background: Hypertension is the one of the leading risk factors for all cardiovascular disease in general and CAD in particular. Measurement of blood pressure can be done using different BP devices mainly ABPM. Ambulatory blood pressure monitoring measures a person's blood pressure during regular daily life, including sleeping hours at night, and hence provides accurate risk estimation of exposure to abnormal blood pressure.

Aim: To compare the blood pressure variability before and after percutaneous coronary intervention with ambulatory blood pressure monitoring in patients of stable and unstable coronary artery disease.

Methods: 52 Coronary artery disease patients (28 with stable and 24 with unstable coronary artery disease) fulfilling the inclusion criteria were enrolled in the study. Patients diagnosed as case of coronary artery disease underwent history taking, physical examination and investigation. Coronary angiography was performed using judkins method. The ABP was monitored before PCI as well as 1 day after PCI.

Result: Patients in stable angina group showed no significant change in peak day time, peak night time, average day time, average night time, minimum day time, minimum night time systolic blood pressure variability following PCI however significant decrease in the diurnal index was observed.

Patients in unstable angina group showed no significant change in the peak night time, average night time, minimum day time, minimum night time systolic blood pressure variability following PCI however significant decrease in peak day time, average day time and the diurnal index was observed.

Conclusion: Comparison of the ambulatory blood pressure monitoring before and after PCI showed that, within 48 hours of post PCI, the ambulatory blood pressure indicators did not differ statistically from those before PCI.

Abstract Topic: Comorbidities

Abstract ID: 38

Author Name: Azhar Qureshi, Jalees Fatima, Devendra Kumar, Zeba Siddiqi

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Abstract Title: Increased Risk of Mortality with Presence of Hypertension and Coronary Artery Disease among Severe Covid-19 Patients

Background: Coronavirus disease 2019 (COVID-19) has spread across the globe, and has been officially confirmed by the World Health Organization (WHO) as a public health emergency. Most COVID-19 patients present with mild or no symptoms, but a few portions of patients may develop severe pneumonia with progression to lethal complications, including acute respiratory distress syndrome (ARDS), multi-organ failure and death. Determining risk factors to anticipate the severity of COVID-19 are essential for efficient resource allocation, especially during this pandemic season. Hypertension is one of the most prevalent chronic diseases, affecting approximately (1.39 billion) worldwide in the year 2010. It is postulated that hypertensive patients have increased angiotensin-converting enzyme 2 (ACE2) expression due to associated genetic polymorphism and use of angiotensin-converting enzyme inhibitor (ACE-I) or angiotensin-receptor blocker (ARB), which even though still controversial, may increase susceptibility and severity of COVID-19. This study was aimed at investigating the association between hypertension and poor outcome in patients with COVID-19 pneumonia by performing a systematic review and meta-analysis. Hypertension is the frequent comorbidity found in COVID-19 patients. Association of Hypertension with COVID mortality has been reported a lot in the literature. Hypertension with Coronary vascular disease (CAD) increased the complexity of patient condition. An increase in risk of mortality with presence of Hypertension, CAD and both among COVID-19 patients has been postulated.

Aim: To assess the risk of mortality with presence of Hypertension, Coronary Artery Disease and both among Covid-19 patients. Also to investigate the association between hypertension and outcome in patients with Coronavirus Disease (COVID-19)

Methods: This was a cross sectional study conducted on ICU/HDU patients in a tertiary care hospital. The total sample size was 1055. The cases were the Covid – 19 patients admitted in 2021.

Result: The study found that presence of Hypertension increases the odds of mortality 2.17 times (OR=2.17, 95% CI : 1.62-2.91, p<0.001), presence of CAD increases the odds of mortality 2.97 times (OR=2.97, 95% CI : 1.04-8.52, p<0.001) and presence of Hypertension with CAD increases the odds of mortality 5.15 times (OR=5.15, 95% CI : 2.39-11.11, p<0.001).

Conclusion: Hypertension and CAD both are the risk factor for in-hospital mortality and this risk further increased if both Comorbidities are present together. Hypertension was associated with increased composite poor outcome, including mortality, severe COVID-19, ARDS, need for ICU care and disease progression in patients with COVID-19.

Abstract Topic: Basic Research

Abstract ID: 37

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Abstract Title: study of renin angiotensin system (ras) genes polymorphism in the patient WITH hypertension & type 2 diabetes mellitus

Background: Previous studies found that polymorphisms in RAS genes (i.e., AGT M235T (rs699), ATIR A1166C (rs5186) and ACE I/D (rs4340)) were associated with the pathogenesis of Hypertension.. ACE and Ang II, in cardiovascular diseases suggest that the disease process might be affected by gene disorders. This was supported by association studies involving polymorphisms in the genes of RAS pathway components and coronary disorders.

Aim: To study the association between Renin Angiotensin System (RAS) Genes polymorphism with hypertension and T2DM.

Methods: We did Prospective, case control study in 200 patients over the period of 24 month. In this study Genomic DNA was extracted from peripheral blood leukocytes. Integrity of genomic DNA was visualized by electrophoresis in 1.0% agarose gel. Three polymorphisms in genes of RAS were studied: rs5186 in Angiotensin ll type 1 receptor (AGTR1), rs699 in angiotensinogen(AGT) and rs4340 of angiotensin converter enzyme(ACE).

Result: The difference in proportion of 1 & D allele of rs4340 gene was found to be significant among various groups in overall cases ($p<0.05$) with significantly low proportion of I allele in hypertension, T2DM and Htn+T2DM groups in comparison to control, while significantly high proportion of D allele was seen in HTN, T2DM and HTN+T2DM groups in comparison to control. The difference in overall proportion of all genotypes of rs699 gene was found to be insignificant among various groups in overall cases ($p>0.05$). The difference in proportion of A & C allele of rs5186 gene was found to be significant among various groups in Male cases ($p=0.030$). A allele showed in significantly high proportion in T2DM cases and C allele showed in significantly low proportion in T2DM cases.

Conclusion: Research identified that genetic variants studied actually have an influence on hypertension group and both hypertension+T2DM group

Abstract Topic: Basic Research

Abstract ID: 36

Author Name: Aditya Barbhuyan, Zeba Siddiqi, Jalees Fatima, S Tasleem Raza

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Abstract Title: Association of Polymorphism in COL4A1(rs565470) Gene with the Risk of Diabetic Nephropathy in North India

Background: Diabetic nephropathy (DN) is progressively becoming a major challenge for the health care system. Identification of genetic components of diabetic nephropathy is the most important area of diabetes research because elucidation of genes associated with it will lead to better understanding of the disease at molecular level, its related complications, diagnosis, cure, treatment and prevention

Aim: aim of the research was to study the role of genetic polymorphism of COL4A1(rs565470) gene in increasing susceptibility to DN in North Indian Population.

Methods: Our study included 50 DN cases and 50 controls. COL4A1 polymorphisms were evaluated using polymerase chain reaction followed by restriction fragment length polymorphism (PCR-RFLP). The genotyping data were compared between cases and controls using chi-square test and logistic regression analysis

Result: We observed a significant difference in cases and controls on comparing the allele frequencies of T and C alleles. The frequency of occurrence of TT genotype and T allele was higher in our cases (52% and 76% respectively) as compared to controls (26% and 54% respectively) (P values were 0.008 and 0.001 respectively) leading to a possibility that they could act as risk allele for prediction of diabetic nephropathy in our set of patients

Conclusion: COL4A1(rs565470) gene polymorphism is associated with the risk of diabetic nephropathy.

Abstract Topic: Basic Research

Abstract ID: 34

Author Name: Ritu Tiwari, Shivam Verma,Narsingh Verma

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Abstract Title: To study the impact of blood pressure on heart rate variability parameters

Background: PCOS patients shows common features like increased insulin resistance and adiposity, which have been known to correlate with sympathetic hyperactivity. It has been shown to be associated with type 2 diabetes mellitus, increased risk of cardiovascular disease. HRV should be considered as a technique that characterizes the modulation of Autonomic tone.

Aim: To study the impact of cardiometabolic parameters such as blood pressure on time-domain and frequency-domain heart rate variability parameters.

Methods: A case-control study was carried out that included 30 women with PCOS(who fulfill Rotterdam criteria) in age group of 20-40 years as cases and another 30 age-matched apparently healthy women with regular menstrual cycles as controls.

Blood pressure and anthropometric measurements were taken. HRV study was done by using AD Instruments HRV (2.0)in autonomic nervous system lab. Time-domain as well as Frequency-domain parameters were recorded.

Result: PCOS cases had significantly higher body weight, BMI, waist-hip ratio, SBP and DBP. Normotensive females had significantly higher SD-SD, rmsSD, HF%, HF (ms2), HF (nu), SD1 values while Prehypertensive females had significantly higher LF%, LF (nu), LF/HF ratio. Rest of the parameters were comparable for normotensive and Prehypertensive females enrolled in the study.

Conclusion: On evaluating the effect of blood pressure on heart rate variability parameters, on overall evaluation (cases + controls), mean SD-SD, rmsSD, HF%, HF (ms2), HF (nu) and SD1 values were found to be significantly higher among those with SBP/DBP <130/85 mmHg as compared to those with SBP/DBP >130/85 mmHg whereas mean LF%, LF(nu), and LF/HF were found to be significantly lower in those with SBP/DBP <130/85 mmHg as compared to those with SBP/DBP >130/85 mmHg

Abstract Topic: Comorbidities

Abstract ID: 33

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Abstract Title: Gastritis & Hypertension- Connection?

Background: Hypertension, also known as high or raised blood pressure, is a condition in which the blood vessels have persistently raised pressure. Prevalence of hypertension in India is about 29.8 % (in urban areas 33.8% and in rural areas 27.6%) Many factors are involved in the development of essential hypertension, but whether Gastritis has an increased risk of hypertension remains controversial.

Aim: Assess the relationship between gastritis & hypertension

Methods: In this case control study, 33 patients with gastritis and 43 without gastritis patients were enrolled as per exclusion and inclusion criteria. Whole study conducted at Department of Gastroenterology KG medical University.comparison of blood pressure and other determining variables was done.

Result: There were 33 patients with gastritis and 43 without gastritis. Age of patients ranged from 14 to 65 years. Mean age of patients in gastritis and non-gastritis group was 31.67±9.10 and 35.19±11.13 years respectively. Majority of gastritis 60.6% as well as non-gastritis 74.4% patients were males. Prevalence of essential hypertension was 24.2% in gastritis and 14% in non-gastritis groups. Statistically, there was no significant difference between two groups for age, sex and prevalence of essential hypertension.

Conclusion: This study indicated that certain aspects of reflux episodes may be associated with elevated blood pressure. Antiacid therapy brought esophageal pH to normal and dramatically decreased high blood pressure, indicating that treatment of Gastritis may be beneficial for normalizing blood pressure in individuals with essential hypertension.

Abstract Topic: Complications

Abstract ID: 32

Author Name: Sriraam Rajagopal, Vasudeva Acharya, Cynthia Amrutha

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Abstract Title: Dancing heart, leaking snare: Is it time to look for crescents?

Background: Diagnosis of Systemic Hypertension is consensus-based and treatment is initiated when systolic blood pressure in the office/clinic is ≥140 mmHg and/or diastolic blood pressure is ≥90 mmHg following repeated examination. However, the differentiation of Hypertensive urgencies and hypertensive emergencies requires the presence of acute Hypertension Mediated Organ Damage(HMOD).

Aim: In this case study, we review a case with elevated blood pressure(BP) and deranged renal parameters posing a diagnostic dilemma.

Methods: A 69 year old gentleman, known case of Systemic Hypertension, Type2 Diabetes, Ischemic Heart Disease, presented with palpitations since 1 day. Physical evaluation showed BP: 200/100mmHg. Investigations showed deranged renal parameters and proteinuria(+2). Ophthalmic evaluation showed no evidence of diabetic/hypertensive retinopathy, no papilledema, electrocardiogram showed left ventricular hypertrophy, echocardiogram within normal limits. Ultrasound abdomen showed bilateral shrunken kidneys, grade II renal parenchymal changes. Anti PLAR2 antibodies and complement levels were sent for etiological workup, was inconclusive. Renal biopsy was suggested to rule out Rapidly Progressive Glomerulonephritis, done in the successive IP admission, and showed Chronic Glomerulosclerosis likely of non-diabetic etiology, Interstitial sclerosis and severe atrophy, immunofluorescence negative.

Result: Presence of deranged renal parameters without other evidence of HMOD prompted us to treat this as a hypertensive urgency and manage on oral anti-hypertensives. The cause-effect relationship between hypertension and renal disease remained a dilemma, since renal disease is the most common cause of secondary hypertension, conversely, hypertension causes nephrosclerosis. The only definite diagnostic modality was renal biopsy, yet the invasive nature of the test prompted a cautious route. Ultimately, renal biopsy was justified, and is the case in many similar scenarios.

Conclusion: Thus, an early renal biopsy must always be considered in patients with elevated BP and deranged renal parameters, as an early etiological diagnosis allows us to initiate therapy at an earlier stage, and prevents the unessential use of IV Antihypertensives.

Abstract Topic: Hypertension in Young

Abstract ID: 31

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Abstract Title: Association of Neck Circumference with Blood Pressure among Asian Indian young adult males

Background: In India, only a few studies have been undertaken to find the association of neck circumference, a novel measure as anthropometric marker with blood pressure among adults.

Aim: The present cross-sectional study was aimed to find out the association of neck circumference as anthropometric marker with blood pressure among young adult males of Asian Indian origin.

Methods: This study was carried out among 461 young adult males aged 21 to 30 years from rural and sub-urban areas in West Bengal, India from February to April, 2022. Anthropometric measurements, such as stature, body weight, Minimum Waist Circumference (MWC) and Maximum Hip Circumference (MHC) were measured using standard methodology. Systolic (SBP) and Diastolic (DBP) blood pressure were recorded according to a proper methodology. Neck Circumference (NC) was measured from each participant. A schedule was used to collect data on the socio-demographic profile, behavioural activity, weekly physical activity and family history of hypertension.

The weekly consumption of food was collected using a food frequency schedule.

Result: The mean NC among the participants (mean age: 24.99±2.59) was 36.51±2.49. Among all participants NC was significantly associated with Stature (P=0.0021), Weight (P=0.0001), MHC (P=0.0258) and SBP (P<0.0001). DBP was not significantly associated with NC (P=0.7966). In addition, NC is significantly associated with BMI (P=0.0381), SBP (P<0.0001) and DBP (P=0.0041) among obese participants according to WHO BMI cut-off for Asians. ($\geq 25\ kg/mt^2$).

Conclusion: The study showed that the NC is significantly associated with BMI, SBP & DBP among adult obese males. NC could be an easily measured clinical screening tool for determination of obesity and hypertension.

Abstract Topic: Nonpharmacological Management

Abstract ID: 30

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Abstract Title: Effectiveness of walking vs structured exercise program on maternal blood Pressure adaptation in normotensive pregnant women.

Background: Hypertensive disorders complicate about 10% of all pregnancies. Treatments of hypertension disorder of pregnancy with antihypertensive drugs are usually controversial in the treatment of pregnant women as it may cause adverse effects on fetal growth. Walking is the most common prescribed form of exercise given to pregnant women. To date, there is limited data on the effect of structured exercise on resting BP in pregnant women.

Aim: Aim of the present study was to evaluate the effect of structured exercise on arterial systolic and diastolic BP at rest and during uphill treadmill walking, in healthy pregnant women

Methods: It was a single-blind, single-center study comparing pregnant women undertaking structured exercise with regular walking program. Inclusion criteria were clearance from a gynecologist to participate in study; aged between 18 and 35 years; singleton pregnancy; gestational age ≤16 weeks; and no current alcohol, tobacco, or medication use. All sessions started at 16 weeks of gestation and were performed 4 times weekly. Primary outcome was mean difference in resting systolic and diastolic BP from baseline to after intervention. Secondary outcome was the mean difference in systolic BP during uphill treadmill walking.

Result: There were no differences among groups in maternal age or pre pregnancy body mass index. At baseline, resting systolic and diastolic BP was 115/67 ± 12/8 and 115/66 ± 10/7 mmHg in the walking and structured exercise group. After the intervention, resting systolic blood pressure is decreased in both the groups. During uphill treadmill walking, the between-group difference in systolic BP was 5.8 mmHg and diastolic BP was 5.4 mmHg respectively

Conclusion: All form of physical activity is beneficial in lowering maternal resting blood pressure throughout pregnancy but structured training was noted to be the most beneficial in improving systolic blood pressure

Abstract Topic: Prevention

Abstract ID: 29

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Abstract Title: Knowledge Regarding Home Blood Pressure Monitoring among Hypertensives.

Background: More than 80% of the burden of hypertension in low-income and middle-income countries is because of the lack of information and poor self-care practice. Lack of knowledge about hypertension is a major challenge in controlling hypertension. Monitoring of BP is a key aspect of the diagnosis and management of hypertension. Self-monitoring of BP by patients at home is one strategy by which hypertensive patients can participate in their own health care and leads to small but significant reductions in BP. Although self-monitoring of BP is common among people with hypertension these days but the correct method to record HBPM is still lacking in India.

Aim: Knowledge Regarding Home Blood Pressure Monitoring among Hypertensives.

Methods: 100 hypertensive patients age between 30-70 years were selected. They were given questionnaire regarding patterns and methods of use of self monitoring of BP. Analysis was done using SPSS version 15.

Result: 35% used automated machine for BP recording while 57% depend on others and 8% feels no need for recording.1% knows the correct positioning of BP recording while 29% used sitting, 52% supine while 18% in any position.93% used single reading while 7% used multiple reading.7% used morning reading, 52% used morning and evening while 41% takes at anytime.69% feels automated machine gives inaccurate reading.27% feels a need for HBPM.52% hava HBPM machine but only 22% of them are using it rest just buy as told by others.40% used automated machine while 53% use mercury while 7% use aneroid.

Conclusion: Proportion of knowledge of self-monitoring of BP and the practice of self-monitoring of BP among hypertensive patients on follow-up were low. Patients' failure to recognize benefits, lack of awareness, cost and perception of inaccuracy were barriers. Correct method and regular HBPM is one of the method which help in detecting the early changes in the BP which will help in reducing the morbidity and mortality.

Abstract Topic: Complementary Medicine & Others

Abstract ID: 28

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Abstract Title: systemic hypertension with uncontrolled type 2 diabetes mellitus with acute invasive fungal sinusitis with cerebral abscess with posterior ischaemic optic neuropathy: a case report

Background: Reporting an immunocompromised patient with C/O fever, sudden painless diminution of vision in right eye, cough 3-4 weeks duration. MRI Brain showed sinusitis involving right paranasal sinus, orbital cellulitis and diffusion restriction vasogenic edema suggestive of cerebritis with cerebral abscess. Diffuse restriction involving posterior right optic nerve. After intensive antifungal drugs, with antibiotics and anticonvulsants, and immune reconstitution, patient recovered. Antihypertensive and antidiabetes given.

Aim: Need for orbital exenteration should be contraindicated in patient with hypertension, diabetes with invasive fungal sinusitis with posterior ischaemic optic neuropathy.

Methods: 62yr old Male patient known Hypertensive&Diabetic since 15yr was admitted in our hospital, with C/O Fever, Sudden painless diminution of vision in right eye, Cough of 3-4 weeks.

O/E patient ill looking, BP140/90, temperature99.5. Initial evaluation revealed, Visual Acquity Right eye HM PLpositive PRpositive in all quadrants with relative afferent pupillary defect, fundoscopy revealed Disc pallor and clear media while left eye glossily normal.

Result: Patient was stabilized, antipyretic and antihypertive given. Investigations-CBC:Hb-8.7, platlet-321.4, TLC-9.40, Urine sugar ++, HbA1c-9.3. CECT head revealed Brain abscess in right frontal lobe. MRI Brain showed sinusitis involving right paranasal sinus, orbital cellulitis and diffusion restriction with vasogenic edema suggests cerebritis with cerebral abscess. FESS done shows fungal debris in right and left nasal cavity, septal perforation with granulation tissue. Biopsy sample sent for HPE revealed fungal hyphae. Antifungal agents, IV loading dose given 4weeks followed by oral maintainence dose for 3months with antibiotics, anticonvulsants and antihypertensive. Diabetes was treated with insulin. Patient was discharged in improved condition.

Conclusion: Acute invasive fungal sinusitis an aggressive and fatal angioinvasive infection of paranasal sinuses and vital organs. AIFS being recognized in patients with hypertension and diabetes. Despite improvements in therapies for AIFS, mortality remains high. It is known that intracranial extension negatively impacts survival of patients with IFS. Reports found that orbital involvement was not negative prognostic factor in IFS, and orbital exenteration didnot improve survival. Once angioinvasion occurs, thrombosis and mycotic aneurysms develop, resulting in ischemia, infarction, and other neurologic symptoms. Early diagnosis and immediate treatment, including antifungal therapy and surgical debridement, are vital for better survival rates.

Abstract Topic: Pharmacological Management

Abstract ID: 27

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Abstract Title: losartan effect decreased serum uric acid level in hyperuricaemia hypertensive patients

Background: hypertension is strongly associated with hyperuricaemia. Hyperuricaemia is frequently encountered in hypertensive patients and is often due to a defect of renal urate clearance. Serum uric acid levels are elevated in hypertension and are present in 25% of untreated hypertensive subjects.

Aim: aim of this study is to evaluate the effect of losartan in lowering the serum uric acid level.

Methods: this study was conducted in the patient attending opd and admitted in the wards of carrier institute of medical sciences and hospital, lucknow. It was a before-after study design, the subjects included were 50 hypertensive patients.54% male and 46% female. All male patient had serum uric acid level above 7mg/dL and female patient had serum uric acid level above 6 mg/dL. All patients were given losartan 50mg once a day and were evaluated after 2 months of the treatment.

Result: There was a decreased serum uric acid level before and after losartan treatment. The effect of losartan on serum uric acid level was initially 8.57±1.26 mg/dLwhich reduced to 5.94±1.57 mg/dLwhich equals to 2.63 mg/dL(95% CI) after 2 months of losartan treatment.

Conclusion: This study proved the effect of losartan on the decreased serum uric acid level in hyperuricaemic hypertensive patients.

Abstract Topic: Basic Research

Abstract ID: 26

Author Name: Suman Ganjir, A. M. Ansari, Ashok Kumar Mishra

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Abstract Title: Electrolyte imbalance in heart failure patients using ivabradine.

Background: In heart failure (HF), the mainstay therapy for congestion, is associated with electrolyte abnormalities and worsening renal function. Ivabradine mediates fluid retention in heart failure. In contrast to diuretics, the antagonist Ivabradine may increase net volume loss in heart failure without adversely affecting electrolytes and renal function. Subjects with heart failure may show hyponatremia, calcium, and potassium (hypokalemia) deficiencies; the latter two play a pivotal role in the development of cardiac arrhythmias. Aim to observe the effect of ivabradine on serum electrolyte.

Aim: To observe the effect of ivabradine on serum electrolytes.

Methods: A total of 50 patients of age more than 18 years admitted with a clinical diagnosis of HF, evidenced by jugular venous distention,

peripheral edema or rales, on standard therapy were included in the study andwere treated with Ivabradine.

Result: Electrolytes concentrations increased significantly after treatment with Ivabradine from baseline ($p<0.02$). There was a significant improvement in symptoms and New York Heart Association (NYHA) class after starting Ivabradine ($p\leq0.05$). Ivabradine significantly reduced the rates of cardiovascular death and HF hospitalizations in patients taking <50.0% of guideline-recommended beta-blocker dose. There was a dose related increase in urine volume, and a significant concomitant increase in sodium excretion at the two highest doses. Side-effects associated with Ivabradine included increased thirst (24.0%), dry mouth (32.0%) and increased urination.14.0% patients had worsening renal functionand12.0% patients developed hypernatremia.

Conclusion: Ivabradine initiation in patients with HF in addition to standard therapy may hold promise in improvement in NYHA class. At the same time, we observed that serious adverse events such as renal function deterioration, and hypernatremia, developed after Ivabradine treatment, which needs to be addressed in future studies with larger sample size.

Abstract Topic: Comorbidities

Abstract ID: 24

Author Name: Sanasam Lakshmi Devi, Abdul Mateen Ansari

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Abstract Title: Arterial Hypertension and COVID-19 in-hospital mortality.

Background: Hypertension is a major concomitant disease in hospitalized patients with COVID-19 infection. The adverse effect of hypertension on prognosis in COVID-19 is known. Nevertheless, it is not known how COVID-19 progresses in arterial hypertensive patients.

Aim: To study the effect of arterial hypertension in hospital mortality in patients hospitalized with COVID-19.

Methods: In the study, included 100 COVID-19 patients. The patients were divided into two groups according to the non-hypertensive (n=50), hypertension (n=50). These two groups were compared according to demographic features, clinical signs and investigation.

Result: Of 100 patients, 58% were males, of whom 18.5% died and 81.5% were discharged. he mean value of the patients' age was 53.7±13.8 years, and the mean hospitalization was 11 days (ranging:1-45 days). Hypertension was the most common comorbidity (35.1%); 18.1% were dead and 81.9% survived. Hypertensive patients with COVID-19 infections had a significant higher mortality risk compared with normotensive patients.

Conclusion: Hypertension is the most common cardiovascular comorbidity. COVID-19 in-patients with arterial hypertension was associated with a high in-hospital mortality. The usual risk factors for severe COVID-19 and the severity of arterial hypertension were associated with mortality in this population.

Abstract Topic: Prevention

Abstract ID: 23

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Abstract Title: Health Seeking Behavior of Hypertensive Patients Attending in a Tertiary Care Hospital, Lucknow.

Background: Hypertension (HTN) is a chronic condition of concern due to its role in the causation of coronary heart diseases, stroke, and other vascular complications and leading risk factors for cardiovascular morbidity and mortality. Hypertension control and its health-seeking behavior are low worldwide and are associated with increased mortality.

Aim: To explore the health-seeking behavior, perception, and out-of-pocket expenditure of patients attending tertiary care hospital, Lucknow.

Methods: Hospital-based observational Cross-sectional study was carried out in both inpatient and outpatient in the department of medicine from 15th May to 15th June 2022 in Career Institute of Medical Sciences and Hospital, Lucknow. A total of 104 adult hypertensive patients were enrolled after taking informed written consent. Data was collected using a semi-structured questionnaire and analysis was done using MS Excel.

Result: In the study, 104 participants were included. The majority of the participants were male 56.4% and 43.6% females. Nearly half 46.6% were in the age group of 61-70 yrs.75.5% seek treatment from private hospitals and 24.5% from government hospitals.78.4% had Diabetes Mellitus (DM) as a comorbid condition. About 34.3% of participants were testing their blood pressure (BP) on the doctor's advice.83.8% of participants were on regular medication, 73.5% were following the diet and 63.7% were doing regular exercise as advised.22.5% of the cases responded that their work capacity has been affected by the disease. The mean Total out-of-pocket expenditure in Govt. hospital was (Rs.1221) & in the Private hospital was (Rs.2703) which was found to be significant. Data collection is still going on and all the attributes of the study will be presented in due time.

Conclusion: The study revealed that cases of Hypertension (HTN) mostly consult private Hospital centers for their morbidity. The cases opined that they are satisfied with their work capacity & disease treatment.

Abstract Topic: Echocardiography in Hypertension

Abstract ID: 22

Author Name: Sankalp Ranjan, Shamim Ahmad Khan, Abdul Mateen Ansari

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Abstract Title: A Review of Echocardiograms in Hypertensive Adult Patients.

Background: Hypertension is known to cause a majority of heart diseases. Anatomical andfunctional changes of the heart can easily be detected by echocardiography, which is asafe and readily available study.

Aim: The aims of this study were to evaluate the prevalence of common echocardiographicchanges in chronic hypertensive patients and to compare these changes in male andfemale populations.

Methods: The study was a community-based cross-sectional study, on 100 adult hypertensivepatients, seen in different government and private hospitals, with integrated clinicaland echocardiographic data.

Result: Study population consisted of 100 adult hypertensive patients, who hadechocardiography done. Overall 90% of the echocardiograms had abnormal findingsincluding but not limited to TR, Diastolic dysfunction, MR, and LVH. There wassignificant difference between the rate of MR in male and female population.

Conclusion: Echocardiographic study showed a variety of abnormalities in hypertensive patients. Drug selection in hypertension should be driven by the underlying cardiac pathology. Certain drugs have more effectiveness for diastolic dysfunction, LVH, systolicdysfunction and pulmonary hypertension and are superior choices when theseconditions are present. Echocardiogram is a non-invasive and easily available tool inorder to help us to select the best treatment strategy to optimize hypertensive controlin the challenging group of elderly patients. The results of our study should influenceus to liberally use echocardiography in these patients to guide treatment decision and drug selection.

Abstract Topic: Comorbidities

Abstract ID: 21

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Abstract Title: Correlation between lipid metabolism indices in patients with hypertension and subclinical hypothyroidism

Background: Thyroid dysfunction has a great impact on lipid as well as a number of other cardiovascular risk factors. Hypothyroidism and hypertension is relatively common and is associated with an unfavorable effect on lipids.

Aim: The aim is to study correlation of lipid levels in patient with hypertension and subclinical hypothyroidism.

Methods: The total of 50 patients with stage1 and stage2 hypertension were included in the study. The patients were divided into two groups based on whether they have hypothyroidism or normal thyroid function.

Result: Mean diastolic blood pressure increased in hypothyroidism patients. A significant relationship was found between TSH >4.6 mlU/L and elevated TG & elevated LDL-C; the frequency of elevated LDL-C was 2.2 times greater in people with subclinical hypothyroidism than in people with subclinical hypothyroidism than in people with normal TSH levels. Elevated triglycerides have an effect on the progression of arterial hypertension and associated with diastolic dysfunction of the left ventricle.

Conclusion: Our study revealed that hypothyroidism patients have a greater prevelance of dyslipidemia and arterial hypertension and a greater value of mean diastolic pressure versus control patients. The combination of hypothyroidism and hypertension is an unfavourable factor in the development and progression of dyslipidemia, which can cause blood coagulation disorders, cardiac and renal damage.

Abstract Topic: Basic Research

Abstract ID: 20

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Abstract Title: Ace Inhibitor: A Friend or Foe?

Background: We examined whether COVID-19 risk differs according to antihypertensive drug class in patients treated by ACE inhibitors and ARBs compared with calcium channel blockers (CCBs).

Aim: the purpose of this study is to determine the effect of different classes of Antihypertensive drugs in management of covid-19 patients with hypertension on the basis of different studies

Methods: In all patients of COVID-19 with hypertension using different classes of antihypertensive drugs accordingly, and observing the outcome of the disease progression. On the basis of in different studies

Result:

1. Alpha-Blockers was associated with a relative risk reduction of 34% for mechanical ventilation and death [1]
2. Beta-Blockers causes downregulation of the angiotensin-converting enzyme 2 (ACE-2), reducing the expression of proinflammatory cytokines, and the reduction of complications, such as pulmonary embolism, ARDS, and septic shock [2]
3. Calcium Channel Blockers (CCBs). nifedipine and amlodipine significantly reduced the death rate and the risk of intubation and mechanical ventilation in elderly patients with COVID-19 [3]
4. ACE Inhibitors and ARBs.

   On the one hand, ACE inhibitors and ARBs might upregulate ACE-2 expression, a cellular receptor for SARS-CoV-2. On the other hand, these drugs were shown to play a protective role in acute lung injury [4]
5. Spironolactone

   Effective in reducing SARS-CoV-2 infectivity, inhibit cytokine storm, and alleviate organ injury. therefore, it can protect at all stages of COVID-19 infection[5]
6. Diuretics

   Have deleterious effects on cardiopulmonary interactions in COVID-19 patients receiving mechanical ventilation. Furthermore, an association between using diuretics and a higher risk of cardiac injuries in COVID-19 has been observed. [6]
7. Direct Renin Inhibitors: Aliskiren was shown to be effective and safe for treating severe COVID-19 patients with hypertension. [7]

Conclusion: Based on the available literature, it is recommended to continue using antihypertensive agents in the patients with coexisting COVID-19 and hypertension. Furthermore, RAAS inhibitors may have superior beneficial.

Abstract Topic: Basic Research

Abstract ID: 19

Author Name: Mohd Aquib Naushad, Abdul Mateen Ansari

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Co-Author Name 1: DR.

Abstract Title: association of serum uric acid and microalbuminuria in prehypertension individuals

Background: The relationship between uric acid and microalbuminuria in healthy adults without other cardiovascular risk factors may helpto clarify the role of uric acid in cardiovascular disease.

Aim: To study and compare the association of serum uric acid levels with microalbuminuria in normotensive and pre-hypertensive subjects without a history of cardiovascular disease or renal dysfunction.

Methods: 140 subjects were included in study. Study was done on both male and female prehypertensive patients of age more than 18 years andless than 60, admitted in wards and attending OPD of Career Institute of Medical Sciences and Hospital, Lucknow.. Controls were normotensive patients admitted in wards who were matched for age, sex andconfounding factors.

Result: The total prevalence of microalbuminuria was 12.81% (10.10% of normotensives and 16.8% of pre-hypertensives). Hyperuricemia was seen in 12.64% of the total study population. Among normotensives, 9.4% of males and 8.8% of females and in pre-hypertensive subjects, 16% of males & 10.2% of females had hyperuricemia. Among the pre-hypertensives, those with microalbuminuria had asignificantly higher ($p<0.001$) serum uric acid level (7.024 ±1.023 mg/dL) as compared to those without microalbuminuria (5.089 ± 0.965 mg/dL).

Conclusion: This study demonstrates a strong independent association between uric acid level and microalbuminuria in pre-hypertensive subjects without a history of cardiovascular disease, diabetes, decreased renal function.

Abstract Topic: Complementary Medicine & Others

Abstract ID: 17

Author Name: Rehan Bari, Nitin Ranjan Gupta

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Abstract Title: An Interesting case of Graves Disease with Bradycardia

Background: Grave's disease is an autoimmune form of hyperthyroidism associated with ophthalmopathy, Dermopathy, Tachycardia etc.

Aim: To present a rare case of Grave's disease presented with bradycardia

Methods: A case of Grave'a disease presented in opd with bradycardia was evaluated for cause of bradycardia.

Result: Bradycardia was seen in this pt of Grave's disease due to Trifascicular block

Conclusion: Any patient coming to OPD/ER with Bradycardia and sign of hyperthyroidism should be worked up for Grave's disease

Abstract Topic: Epidemiology

Abstract ID: 16

Author Name: Pragnesh Mori, Prem Shankar Singh, Ajay Mishra, M S Siddiqui

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Abstract Title: Study of Electrocardiography Pattern in Patients of COVID-19.

Background: COVID-19 pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), mainly affected the respiratory system. Although the exact mechanism of cardiac involvement remains unclear in the COVID-19 infection, cardiac injury and arrythmias were among the common presentations. The association between cardiac injury and poor in hospital outcome has been already established. In this retrospective study we attempt to describe the electrocardiographic characteristics and to identify the prognostic significance of electrocardiography (ECG) findings in patients of COVID-19

Aim: To Study the Electrocardiographic changes and its prognostic significance in COVID19 patients.

Methods: In this observational retrospective study 612 patients with laboratory SARS-Co V-2 RNA detection confirmed and definite in-hospital outcome admitted patients from March 2020 to June 2021 were included. ECGs at the time of admission and during hospitalization were assessed. Abnormal ECGs were defined if primary ST-T segment alteration, left ventricular hypertrophy, tachy or bradyarrhythmias and any new av, bundle blocks or morphology alterations were seen.

Result: In our cohort, there was a significant association between abnormal ECG and major adverse events in patients with COVID-19 infection. We observed ECG is useful in identifying patients with worse in-hospital clinical outcomes. Abnormal ECG score in our study reflected a wide spectrum of cardiac involvement including arrythmias, conduction disorder and ventricular depolarization and repolarization disorders.

Conclusion: our result add to the evidence of cardiac involvement in COVID-19 infection. An association between abnormal ECG score and adverse in-hospital outcome was also established, suggesting that close observation should be kept on patients with multiple ECG abnormalities during their hospitalization.

Abstract Topic: Hypertension in Young

Abstract ID: 15

Author Name: Sankalp Ranjan, Shamim Ahmad Khan, Abdul Mateen Ansari,

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Abstract Title: Diagnosis and Management of Hypertension in Young Adults

Background: High blood pressure hits Indians at a younger age than western populations, and first heart attacks and strokes occur a decade earlier on average. One in five young adults in India has high blood pressure. Increased arterial stiffness due to RAAS activation and increased sympathetic overactivity due to stress have been implicated as primary factors for the same. This study was aimed to understand the Indian clinician's perspective on approach to management of hypertension in young adults.

Aim: To find out the causes leading to the development of hypertension in young and the best treatment that can be given.

Methods: It is an observational prospective study using single random sampling of age group of 18-40 years whose BP were >140/90.

Result: Study is still going on, till date 430 patients are screened (target 650) among them 240 are male and 190 are female. Proportion of men and women was similar (52.0% vs 47.9%). Proportion of patients with BMI ;25 Kg/m2 was 9.1%, 25-29.9 Kg/m2 was 13.2%, and &BMI ;30 Kg/m2 was 9.8%. Mean BP of patients with hypertension was: grade I (146.05/92.73 mmHg), grade II (160.20/96.64 mmHg), and grade III (180.22/100.76 mmHg). Mean low density lipoprotein (113.26 mg/dL), serum creatinine (2.42 mg/dL), mean HbA1c (7.7%) levels were highest among patients with grade III hypertension. Commonly observed comorbidities were type 2 diabetes mellitus (T2DM: 51.5%), dyslipidemia (36.4%), and chronic kidney disease (CKD: 4.4%). Top concomitant medications included anti-diabetic therapies (34.6%), drugs for dyslipidemia (25.0%).

Conclusion: Most prescribed AHD monotherapies were angiotensin receptor II blockers (ARBs) and calcium channel blockers (CCBs) and most prescribed combination therapies were ARBs + diuretics and ARBs + CCBs. Telmisartan and amlodipine+telmisartan for patients with comorbid T2DM or dyslipidemia and metoprolol for those with coronary artery disease were the commonly prescribed AHDs.

Abstract Topic: Pharmacological Management

Abstract ID: 14

Author Name: Nishant Kanodia, Ankita. K. Panday

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Abstract Title: A Case of Essential Thrombocythemia

Background: Essential Thrombocythemia (Et) Is One Of The Myloprolifertive Neoplasms, Characterised By Persistent Thrombocytosis(Platelets >450, 000/Ul)And Evident Clonal Abnormalities Like Jak2 v617f, Mpl, Calr Mutation And Not Fulfilling Who Criteria For Mds, Cml, Pv And Ida. Here We Report A 39 Year Old Male Who Presented With Headache, Loose Stools And Was Found To Have Thrombocytosis With A Platelet Count Of 900000/ Cumm And Was Diagnosed As Et, As Per Who Criteria 2008.

Aim: to know the effectiveness of cytopheresis and cytoreduction therapy in the treatment of essential thrombocythemia.

Methods: haemogram:

Platelet count 900, 000per cumm.,tlc 30,000/cu, hb 11.5 gm/dl, haematocrit 28.4%, mcv99.5fl;rbc:2.8*10*6/cumm.

Other pathological investigations were normal

Bone marrow examination : bone marrow examination was done and it shows hypercellular marrow with remarkable proliferation of megakaryocytes(morphology as well)a diagnosis of et was made.

He was advised for mutation analysis jak 2 v617f mutation.

Result: cytoreduction therapy with hydroxyurea is effective in the treatment of essential thrombocythemia,patient improved symptomatically with hydroxyurea.

Conclusion: despite the effectiveness of cytopheresis, still chemical cytoreduction,specially hydroxyurea, is being used world wide. This is largely due to the high cost of cytopheresis therapy and the need of a special setting that may not be available everywhere.

Abstract Topic: Complications

Abstract ID: 9

Author Name: Atindra Bhardwaj, Nishant Kanodia

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Abstract Title: Assessment of Dengue Fever Severity Through Liver Function Test

Background: Dengue virus affects over half the world's population in 112 countries, and dengue fever is the second largest arthropod borne infectious global hazard after malaria with complications like Dengue Haemorrhagic Fever (DHF) and Dengue Shock Syndrome (DSS), accounting for significant morbidity and mortality world-over. India is significantly affected with Dengue virus infection.

Aim: Severe Dengue, like DHF and DSS can be predicted by deranged liver function test so that the patients at high risk for complication can be identified early and started on treatment timely.

Methods: An analytical study.297 confirmed cases of DF were collected from a tertiary care hospital in Hims Sitapur, U. P. and their clinical and biochemical data were collected during 18 MONTHS (October 2020 to march 2022). Admitted cases of dengue fever were divided into three groups: mild, moderate, and severe Dengue based on increases in aminotransferases. Elevation in LFTs was co-related with good or bad outcome i.e., (survival or complication free stay) or (death or complications). Results were analysed in SPSS version 16.

Result: Out of the 297 patients with mean age of 37.12 ± 15 45 years, 206 (69.4%) were males and 91 (30.6%) were females. Sixty-three patients

(21.2%) had mild elevation of aminotransferases (two-fold increases), 223 patients (75.1%) had moderate increases (three to fourfold), and 11 (3.7%) had severe (>4-fold increase). Alanine transaminase (ALT) was statistically higher in patients with septicaemia, hepatic, and renal failure (p-value ≤0.05). Aspartate transaminase (AST) was higher in almost all complications. Prolonged hospital stay was associated with raised LFTs and greater complications and mortality. AST was found to be twice as much raised as ALT

Conclusion: AST and ALT were statistically higher in patients with worse outcome thus can lead to early recognition of high risk cases

Abstract Topic: Complications

Abstract ID: 8

Author Name: Atindra Bhardwaj, Nishant Kanodia

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Abstract Title: Dengue fever with diffuse cerebral haemorrhages, subdural hematoma: a case report

Background: Neurological manifestations in dengue fever occur in <1 % of the patients and known to be due to multisystem dysfunction secondary to vascular leakage. Occurrence of widespread cerebral haemorrhages with subdural hematoma during the leakage phase without profound thrombocytopenia

Aim: Increased awareness and high degree of clinical suspicion is needed among clinicians for timely diagnosis of this extremely rare complication of dengue fever

Methods: since it is a case report, no methods required.

Result: since it is a case report, no result obtained.

Conclusion: Exact pathophysiological mechanism of diffuse cerebral haemorrhages without profound thrombocytopenia is not well understood. Increased awareness and high degree of clinical suspicion is needed among clinicians for timely diagnosis of this extremely rare complication of dengue fever. We postulate that immunological mechanisms may play a role in pathogenesis. However, further comprehensive research and studies are needed to understand the pathophysiological mechanisms leading to this complication

Abstract Topic: Basic Research

Abstract ID: 7

Author Name: Dr Nishant Kanodia, D. C Khare

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Abstract Title: to estimate the coronary artery disease,ten years risk assessment by framingham heart risk score calculator.

Background: the framingham heart study recommends the 2018 prevention guidelines tool for cardiovascular risk calculator to calculate to estimate ten years and lifetime risk for atherosclerotic cardiovascular disease(ascvd). This 2018 calculator has been provided by the american heart association and the american college of cardiology. The information required to estimate the ascvd risk include age, sex, ratio of total cholesterol to hdl cholesterol, blood pressure, h/o duration of diabetes and smoking status.

Aim: Prevalence of cardiovascular disease in type 2 diabetes mellitus.

Methods: All the diabetic patient attending to medicine opd were screened for eligibility, the eligible patient were given an informed consent.

Inclusion criteria:

1) adult patient>=35 years old who had been diagnosed with type 2 diabetes mellitus.
2) those willing to give consent.
3) risk factors including as hypertension, dyslipedemia, alcoholic, smoking.

Exclusion criteria:

1) patient <35 years of age.
2) gestational diabetes mellitus(gdm)
3) non willing patient
4) type 1 diabete mellitus

All data was collected and processed through a portable diagnostic tool in the form of artificial intelligent cardiac risk assessment device by kribado. This device get outcome in the form of different categories of cardiac risk on the basis of scoring.

A) Low Cardiac Risk :1-3 Score, Cad Risk <20%.
B) Intermediate Cardiac Risk:4-6 Score, Cad Risk20-50%.
C) high cardiac risk : >=7 score, cad risk >50%.

Result: overall cvd affected 48% of all person with type 2 dm, our proposal is that cad is caused by uncontrolledblood sugar level for longer duration (right shift in the distribution) other risk factors including lipid abnormalities, smoking, alcohol, physically inactive also plays an important role in cad causation.

Conclusion: we analysed data with 220 persons having type 2 diabetes mellitus.116 person of diabetes are at high risk(52.72%), 74 person of diabetes are at intermediate risk (33.63%), 30 person of diabetes are at low risk(13.63%).

Over all 220 person with diabetes mellitus type,68% were male, 57%were obese,ages 61.6+/-6.2 years old with type 2 diabetes mellitus duration of 9.4+/-3.7 years.

Cvd affected 48%overall (n=220), 23.2%angina;18.6%mi, 6.2% Heart failure.

Abstract Topic: Comorbidities

Abstract ID: 6

Author Name: Deepak Kumar Das, Smita Gupta

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Abstract Title: Clinical Spectrum of Hypertensive Patient with Non-Alcoholic Fatty Liver Disease.

Background: Nonalcoholic fatty liver disease (NAFLD) is probably the most common liver disorder in the world, affecting 2.8-24% of

the general population. It is also currently the most common cause of abnormal liver function tests and is recognized as a major cause of cryptogenic cirrhosis of liver. The natural history of the disease is still unclear.

NAFLD rates are increasing in developing countries as well. NAFLD is assuming higher importance now because of the possible role in the development of cardiovascular disease, the association with diabetes and impaired glucose tolerance, the strong relationship with metabolic syndrome.

Early screening in hypertensive groups will aid reducing the disease burden.

Aim: Clinical spectrum of hypertensive Patient with non-alcoholic fatty liver disease.

Methods: 100 hypertensive patients were selected for the detailed work up. Subjects aged 30 to 70 years with established diagnosis of hypertension were included. Detailed assessment was performed for each subject. Information pertaining to demographic data, anthropometric measurements, comorbidities, basic blood tests as well as transient elastography examination was collated from all enrolled subjects.

All subjects provided written informed consent prior to study participation. This study followed the ethical guidelines and was approved by the Institutional ethical committee.

Result: The mean age was 49.82 (±12.68) years and 64.3% were males. The average BMI was 25.37 (±3.58) kg/m2, waist circumference was 98.97+ 18.67.

In terms of increased liver stiffness (LSM ≥ 9.6kPa), more males were observed in the increased liver stiffness group. Higher BMI, waist circumference, Raised ALT and AST and lower platelet, raised ALP, high triglyceride were observed in subjects with increased liver stiffness. On USG, 35% of the patient shows fatty liver.

Conclusion: Conclusion: Such findings carry prognostic implication. In hypertensive patients, fatty liver and NAFLD are frequently found. Early diagnosis will help to take necessary preventive and curative measures to reduce morbidity and mortality in later period.

Abstract Topic: Complementary Medicine & Others

Abstract ID: 5

Author Name: Piyush Chopra, Nishant Kanodia, Rohit Pathak

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Abstract Title: A case of Neurofibromatosis with Hepatitis B with Hepatitis C with Pulmonary Kochs's

Background: A case of Neurofibromatosis with Hepatitis B with Hepatitis C with Pulmonary Kochs's

Aim: A case of Neurofibromatosis with Hepatitis B with Hepatitis C with Pulmonary Kochs's

Methods: A rare case with multiple comorbidities

Result: A case of Neurofibromatosis with Hepatitis B with Hepatitis C with Pulmonary Kochs's

Conclusion: A case of Neurofibromatosis with Hepatitis B with Hepatitis C with Pulmonary Kochs's

Abstract Topic: Prevention

Abstract ID: 4

Author Name: Meghna Gupta, Aman Bharti, Poonam Bharti, Vitull K. Gupta

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Abstract Title: A survey to study the public awareness and knowledge of symptoms and risk factors for heart attack in Punjab.

Background: CVD are the leading cause of morbidity and mortality worldwide including India with ever increasing prevalence especially heart attack (HA). Evidence suggests inadequate knowledge and awareness about HA, both of symptoms and risk factor is important for reducing HA burden, morbidity and mortality.

Aim: To study the public awareness and knowledge of symptoms and risk factors for heart attack in Punjab.

Methods: A cross-sectional questionnaire based survey was conducted with validated pretested self-administered anonymous questionnaire including socio-demographic variables comprising of six questions related to symptoms of HA (SHA) including a trap question and nine questions related to risk factors of HA (RFHA) including a trap question along with question regarding appropriate actions for immediate medical intervention or assistance. Survey included Punjab resident of >18 years of age, able to read and understand Punjabi, Hindi or English, willing to participate.

Result: 2730 subjects participated, but 264 respondents were excluded because they answered 'yes' or 'no' to all questions including trap questions and data of 2466 respondents was analysed. Most, 73.6% respondents recognized chest pain and least, 28.5% recognized difficulty in breathing as SHA whereas most, 71.8% recognized high blood pressure and least, 25.1% recognized diabetes as RFHA.89.6% of respondents answered yes to call for immediate medical intervention. Only 12.2% had excellent awareness of SHA and 4.7% had excellent awareness of RFHA.

Conclusion: The awareness of SHA and RFHA is poor in Punjab which necessitates immediate public awareness campaigns to prevent HA and decrease its morbidity and mortality.