Abstract Book

UPDACON 2022, LUCKNOW
OCTOBER 28 – 30, 2022

Message from the Organising team

A big thank you to all those who have contributed to the successful organization of UPDACON 2022, Lucknow.

We hope that you found the meeting informative and worthwhile. We owe our gratitude to our faculty for taking time out to be part of the scientific programme of this prestigious event and making it a truly enriching experience for all. We also acknowledge all our delegates for enthusiastic participation and hope you all had a fun filled productive time.

We wholeheartedly acknowledge and appreciate the support extended by our industry partners without whom the success of UPDACON 2022 would not have been possible.

We hope the best for you and success in your future.

Manoj Kumar Srivastava
Organising Chairman

Narsingh Verma
Organising Secretary

Anuj Maheshwari
Scientific Chair

Sri Harishankar Maheshwari Best Research Papers

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ASSOCIATION OF LEPTIN, ADIPONECTIN AND IL-8 GENE POLYMORPHISM AND SERUM BIOMARKERS IN COPD AND COPD WITH T2DM IN NORTH INDIAN POPULATION

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Background: : Inflammation plays an important role in chronic obstructive pulmonary disease

(COPD). Increasing evidence points to the role of inflammation in the pathogenesis of type 2

diabetes (T2D).

Aim: We intend to investigate the biomarkers in Adiponectin; Leptin and IL-8 gene for COPD induced T2DM patients. Along with this we analysed the effect of polymorphism on the levels of these cytokines.

Methods: A total of 500 subjects including 250 controls, 191 COPD and 59 COPD with T2DM each, aged 30 to 70 years were enrolled for the study after meeting the inclusion criteria. Written informed consent was obtained from each subject before inclusion in the study. The study was approved by the institutional ethics committee (ethical no 90 TH ECM IIB-FS/P2.).

Result: We found statistically significant results of serum biomarkers in all studied groups.

Leptin, Adiponectin and IL-8 in serum levels were significantly higher with a p-value (0.001) in COPD with diabetes when compared with COPD and healthy controls. Genotyping of Leptin (C/T), Adiponectin (C/G) and IL-8 (C/T) polymorphisms were performed. Genotype frequency of 'CT' of Leptin gene variant was showing significant association with risk of developing COPD by 3.7 folds. But it was not associated witGeh development of T2DM in COPD cases. Whereas genotype 'TT' was highly significant association with risk of developing T2DM in COPD patients by 2.4 folds. This means individuals with genotype 'TT' are at higher risk of developing of COPD and moreover they are at risk of T2DM

Conclusion: We also conclude that genotype 'TT' of Leptin, 'GG' of Adiponectin and 'TT' of IL-8 may be exploited as biomarker for prognosis and diagnosis of T2DM in COPD and COPD respectively. While 'CT' of IL-8 was protective biomarker against COPD.

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DELETERIOUS EFFECT OF TOBACCO IN PATIENTS WITH TYPE 2 DIABETES

Anjali Singh

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Background: Managing diabetes is challenging, and tobacco use can make it even more so. Nicotine increases blood sugar levels and makes them harder to handle.

Aim: The objective of this study was to examine the impact of smokeless tobacco use on blood sugar levels of diabetic tobacco users.

Methods: In this study we recruited the subjects from outpatient department (OPD) of KGMU. Total 80 subjects (40 diabetic non-tobacco users + 40 diabetic tobacco users) were enrolled in the study and their fasting blood sugar (FBS), post prandial glucose (PPG) and HbA1c levels were assessed.

Result: Study participants were aged between 48±10 years. FBS was 163.11±62.7mg/dL, PPG was 246.8±96.4 mg/dL and HbA1c was 7.96±1.6% in diabetic subjects while FBS was 175.9±76.2 mg/dL, PPG was 261.1±104.3 mg/dL and HbA1c was 8.6±2.5% in diabetic tobacco users.

Conclusion: Smokeless tobacco use can even degrade existing status of diabetes in diabetic tobacco users.Thus, tobacco cessation should be promoted as an essential public health practice for diabetes management.

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COST-EFFECTIVE OFFLOADING IN A RESOURCE-CRUNCH SETTING

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Background: India is the global capital of diabetes and its complications. Diabetic foot is the major cause of livelihood loss in India's predominantly young population. Blood glucose control, debridement and offloading are the cornerstones of diabetic foot management. Despite optimum glucose control, debridement and use of antibiotics, most diabetic foot ulcers don't heal because of the lack of proper offloading. Heel ulcers are difficult to heal because they bear the entire body load. Various offloading techniques like half shoes, callipers and total contact casts are available. Total contact cast though the gold standard of offloading, needs technical knowledge, and is costly and labour-intensive.

Aim: In a resource-crunch country like India, we need simple offloading techniques to promote the healing of diabetic foot ulcers without compromising the mobility of the patient. Hindfoot ulcers are difficult to heal because of weight bearing.

Methods: A 55-year-old female suffering from uncontrolled type2 diabetes for the last 15 years reported at our centre with a chronic non-healing ulcer on the plantar surface of the heel. Posterior tibial and dorsalis pedis pulses were palpable. Euglycemic status with achieved with premix insulin and proper antibiotic coverage was given until the ulcer became sterile. The diabetic foot ulcer was debrided extensively during the initial visit.

We used a simple technique of offloading - used gloves were rolled inside out; the edges were rounded and encapsulated with surgical paper tape. After debridement of the wound, the offloading system was secured with surgical paper tape distal to the heel lesion. Dressing and debridement were repeated every third day with normal saline to prevent biofilm formation, followed by a change of the distal offloading.

Result: This simple technique resulted in the healing of a chronic ulcer in 6 weeks.

Conclusion: This is a simple, low-cost, and effective offloading technique for busy practices without compromising the mobility of the patient.

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DISTRIBUTION OF DIFFERENT BLOOD GROUPS IN GDM AND PREGNANCY RELATED COMPLICATIONS

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Background: Gestational diabetes mellitus is a common condition that is defined as glucose intolerance of varying degree with onset or first recognition during pregnancy and it affects approximately 5% of all pregnancies all over the world.

Aim: In this study, we aimed at investigating any possible relationship between the ABO blood group system and GDM and also the transitioning of GDM to overt DM postpartum

Methods: A total of 53 patients with GDM in this cases that have serologically determined blood groups and Rh factor in the hospital records were included in the study, and the patients with unknown blood groups were excluded. Patients were classified according to blood groups (A, B, AB, and O) and Rh status (+/−). GDM was diagnosed based on DIPSI Guidelines.

Result: There was a significant difference between the patients with GDM and control group in terms of distribution of ABO blood groups. Blood group AB was found to be higher in the patients with GDM compared to the control group (P=0.029). When the patients were compared according to the development of DM, the ratio of group O was higher than others, while the ratio of group B was lower in the group developing DM (P=0.001). There was a significant difference between the groups in terms of distribution of ABO blood groups with Rh factor and the ratio of developing DM is found to be higher in patients with +Rh factor among all the blood groups except for group B (P=0.008).

Conclusion: We found a higher risk of GDM for the patients with blood group AB, which means that we have to be more careful on the follow-up of pregnant women with blood group AB.

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CORRELATION OF DIABETIC RETINOPATHY WITH THYROID STATUS

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Background: Diabetic Retinopathy is the most common microvascular complication of diabetes mellitus. Diabetic Retinopathy is the leading cause of preventable blindness worldwide. Thyroid dysfunction is risk factor for diabetic retinopathy. Hyperthyroidism and Hypothyroidism are associated with insulin resistance - a major cause of impaired glucose metabolism. Most common thyroid dysfunction in this group is 'Subclinical Hypothyroidism'. As complications due to diabetes are more in patients with thyroid dysfunction, early correction of thyroid dysfunction plays a key role in management of Diabetic Retinopathy.

Aim: To find correlation between diabetic retinopathy and thyroid status in diagnosed cases of diabetic retinopathy with type 2 diabetes mellitus.

Methods: A cross- sectional study was conducted on 59 patients of diabetic retinopathy with known type 2 diabetes mellitus were taken. Serum thyroid stimulating hormone(TSH) and free thyroxine(FT4) concentration were measured in all 59 patients. Patients with normal TSH and FT4 values are euthyroid patients and those with normal FT4 but TSH value >4µIU/ml are considered as having subclinical hypothyroidism(SCH). Correlation of diabetic retinopathy with thyroid status is evaluated.

Result: Out of the 59 patients included in the study, 36(61%) were male and 23(39%) were female. patients (79.67%) were euthyroid and 23 patients (20.33%) had SCH. It was observed that prevalence of diabetic retinopathy was higher in SCH group as compared to euthyroid group.

Conclusion: Correlation of diabetic retinopathy was compared with serum TSH level and a positive association was seen between diabetic retinopathy and subclinical hypothyroidism.

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ASSOCIATION OF SERUM URIC ACID LEVELS WITH INSULIN RESISTANCE IN PRE DIABETIC AND DRUG NAÏVE DIABETIC SUBJECTS.

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Background: Uric acid produced as a result of chronic inflammation, was known as an inert metabolic end-product of purine metabolism, it has been found that uric acid is involved in pathogenesis of many chronic cardiovascular, renal and metabolic diseases. It causes stimulation of adenosine monophosphate (AMP) deaminase which causes fat storage and insulin resistance compared to stimulation of AMP activated protein kinase that causes degradation of fat and decreases gluconeogenesis. Known mechanism of action of uric acid is to block AMP-activated protein kinase, stimulate gluconeogenesis , insulin mediated endothelial nitric oxide release is blocked by uric acid which is important for insulin action

Aim: To find out association of serum uric acid levels with insulin resistance in pre diabetic and drug naïve diabetic subjects.

Methods: Serum Insulin ELISA Kit of DRG has been used for serum insulin estimation and it works on principle of enzyme-linked immunosorbent assay (ELISA) based on the sandwich principle. Enzymatic colorimetric method is used for serum uric acid estimation. GOD- POD method was used for plasma glucose estimation.

Result: Serum uric acid had significant and positive correlation with HOMA IR with p value of 0.0001. Serum uric had significant and positive correlation with fasting plasma glucose with p value of 0.01. Serum uric had significant and positive correlation with fasting serum insulin with p value of 0.0001. In this study we reported positive and significant correlation of serum uric acid and insulin resistance.

Conclusion: Metabolic syndrome is the key component for both insulin resistance and hyperuricemia. It is quite difficult to do insulin resistance estimation in routine clinics but it is quite easier to find out rising trends in uric acid levels.

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KNEE OSTEOARTHRITIS IN PATIENTS WITH TYPE 2 DIABETES ATTENDING DIABETES CLINIC

Siddharth Tiwari

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Background: Knee osteoarthritis (knee OA) and type 2 diabetes (T2DM) contribute massively as a burden to the Indian society as both are highly prevalent .There are insufficient studies found with respect to their association despite having common risk factors.

Aim: To study the prevalence of knee OA and factors associated with knee OA in patients with T2DM attending Diabetes clinic.

Methods: A cross sectional study, where in 200 (103 male and 97 female) patients of T2DM as per the ADA guidelines were enrolled. Demographic data and disease variables were recorded for all patients. All patients were assessed for knee OA as per clinico-radiological ACR criteria. Radiographic grading (Kellgren - Lawrence grading) was done taking right knee as index knee and functional status for knee OA was assessed using Western Ontario and Mcmaster Universities Index (WOMAC).

Result: Prevalence of knee OA was seen in 92 (46.3%) patients (44 males and 48 females). The mean age of patients was 54 + 9.9 years, mean BMI was 23.29 + 3.6 kg/m2. Knee OA was associated with age , duration of T2DM , uncontrolled status of T2DM and co morbid conditions like hypothyroidism , coronary artery disease , hypertension , dyslipidemia and hyperuricemia.

Conclusion: All the patients with T2DM must be assessed for the presence of Knee OA as a general routine care practice.

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LEFT VENTRICULAR FUNCTION ASSESSMENT IN TYPE II DIABETIC AND NON-DIABETIC PATIENTS ASSOCIATED WITH NON-ISCHEMIC DILATED CARDIOMYOPATHY

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Background: Type II Diabetes mellitus pose a risk for various diseases including cardiovascular disease. Also, Type II diabetes mellitus may lead to left ventricular dysfunction which can be assessed in terms of global longitudinal strain (GLS).

Aim: To compare Left Ventricular Function in patients with Type II Diabetes Mellitus and without Type II Diabetes Mellitus associated with non-ischemic dilated cardiomyopathy.

Methods: A total of fifty (50) patients were selected with the age range of 55 ± 20 years which were divided into two groups, Group I : 25 patients with type II diabetes mellitus associated with non-ischemic dilated cardiomyopathy and Group II : 25 patients without type II diabetes mellitus associated with non-ischemic dilated cardiomyopathy. Mildly reduced left ventricular ejection fraction (HFmrEF) taken was 45 ± 5%. Echocardiographic examination was performed for all the patients which was assessed in terms of global longitudinal strain.

Result: Among fifty (50) patients selected, thirty (30) patients were male while twenty (20) were female. Intergroup comparison showed that most of the echocardiographic parameters were similar in both the groups but GLS for group I was significantly lower than those for group II, although conventional LV function was same.

Conclusion: GLS of non-ischemic dilated cardiomyopathy patient with type II diabetes mellitus was significantly lower than those with non-ischemic dilated cardiomyopathy patient without type II diabetes mellitus. Also, worse long-term outcome can be observed in non-ischemic dilated cardiomyopathy patient with type II diabetes mellitus compared to those without type II diabetes mellitus.

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CONSUMPTION OF HIGH GLYCAEMIC INDEX FOOD ITEMS BY SCHOOL GOING ADOLESCENTS OF LUCKNOW CITY MAY BE A PREDISPOSING FACTOR FOR CAUSING DIABETES IN THEM.

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Background: Worldwide, diabetes mellitus is very common, and even among young people, its occurrence is rising quickly. Diabetes is greatly influenced by nutrition, particularly the macronutrient composition of the diet and particularly the dietary carbohydrates. Consumption of high glycemic index foods items by school-going adolescents day by day.

Aim: to find out the correlation between food consumption pattern of adolescents and metabolic disorders

Methods: In this present study, we included 607 school-going adolescents between 13 and 19 years of age, of both genders, from various schools in Lucknow City. Subjects were selected based on a stratified random sampling method. Schools were categorized based on 5 zones across Lucknow city. Then, from each zone, schools were randomly selected. A structured questionnaire is used to collect data. The nutritional status of the adolescents was collected based on their dietary recall, anthropometric measurements, and family eating patterns. 24 hour's dietary recall is one of the handiest and most effective methods to analyze the person's nutritional status before treatment. This method helps to estimate the approximate quantity of food consumed and it can be used to find average daily food intake and intake on special days.

Result: The consumption of foods specially street foods like Momos, chowmein, kebab roll, aloo chaat and refined flour products among adolescents was quite high irrespective of gender, income group and religion.Apart from consumption pattern the frequency of their intake is also quite high.

Conclusion: we conclude that consumption of these foods in very large quantities and frequency could cause diabetes further. Numerous epidemiologic studies have shown a positive association between a higher dietary glycemic index and an increased risk of type 2 diabetes.

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EVALUATION OF IRON PROFILE IN NEWLY DIAGNOSED TYPE 2 DIABETES MELLITUS

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md medicine,

Background: diabetes is the most common disease and evaluation of iron profilehelps in slows complications

Aim: to evaluate iron profile in newly diagnosed type 2 diabetes

association between serum iron , serum ferritin , tibc and type 2 dm

Methods: 100 diabetic patients blood sample taken for iron profile and evaluated with written and informed consent

Result: serum iron and serum feritin are associated with increased iron stores associated with insulin resistance , poor glycemic control

Conclusion: fasting and post prandial blood sugar , hba1c were raiseed . serum iron , ferritin , transferrin saturation raised . tibc and haemoglobin were lower

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TO STUDY PREVALENCE OF DIABETES MELLITUS AND ITS RISK FACTOR IN HIV PATIENTS.

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Dr. Dinesh Rana (MD)

Background: An increase in glucose disorders has been observed in HIV patients receiving HAART . In 2003, the prevalence of IGT was estimated at approximately 46%, DM2 at 7% and pathologic insulin sensitivity at 61% . An increase in glucose disorders has been observed in HIV patients receiving HAART. In 2003, the prevalence of IGT was estimated at approximately 46%, DM2 at 7% and pathologic insulin sensitivity at 61%.

Aim: To study the prevalence of Diabetes Mellitus in HIV Patients.

Methods: The study will be conducted at department of Medicine at LLRM Medical College and SVBP Hospital, Meerut U.P. from 2020-2021.The study was a cross sectional prevalence study include patient with confirmed status of HIV

(ELISA) admitted in Medicine ward and attending medicine OPD. and patient attended at ART CENTRE.

Result: A total of 120 HIV patients receiving anti retroviral therapy were enrolled in the study. It includes 60.8% males and 39.2% females with majority (40.8%) in the age group of 31-40 years. 9.3% received protease inhibitor containing regimen and 90.7% of the study population received non-protease inhibitor containing regimen. The prevalence of diabetes mellitus was found to be 8.6%. 16.3% of the population were found to have insulin resistance taking antiretroviral therapy.

Conclusion: : The length of time an HIV-infected patient is on the HAART regimen significantly increased the odds of hypertension, obesity, and hyperglycemia. As a result, there is a need to assess HIV patients periodically for cardiovascular risk factors while on the regimen. Periodic assessment willensure early detection and proper management of the risk factors and prevent the additional burden of heart disease.

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STUDY OF VISUAL EVOKED POTENTIAL IN PREDIABETICS

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Background: Diabetic retinopathy is the leading cause of blindness. Persistent hyperglycemia leads to damage of microvasculature supplying the retina and optic pathway. Visual evoked potential is non-invasive method used to evaluate the integrity of visual pathway. The component of major clinical significance in VEP is P100 wave latency. Analysis of P100 wave latency may provide early detection of retina ganglion cells damage in prediabetics which may arise even before the first opthalmoscopically detectable signs of diabetic retinopathy.

Aim: To compare the P100 wave latency in prediabetics and controls.

Methods: There were two groups in the study with 55 subjects each in prediabetics and controls. Groups were based on fasting blood sugar levels. Pattern VEP was measured in both groups by connecting scalp electrodes according to 10-20 International electrode placement system. P100 wave latency was measured and used for statistical analysis.

Result: The mean P100 latencies were significantly prolonged in prediabetics with a mean ± SD (110.19±3.72) as compared with controls(103.97±5.23) in left eye and mean ± SD (109.88 ± 3.27) compared with controls (104.23 ± 4.82) in right eye .There were statistical differences between P100 latencies in Oz-Fz channel of both groups.

Conclusion: Prolonged P100 latency in prediabetics can be established as an early detection marker of diabetic retinopathy. The centres may use VEP as a regular screening method for preventing diabetic complications in prediabetics. A large multicentric study is warranted in future.

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DYSLIPIDEMIA IN PATIENTS OF TYPE 2 DIABETES MELLITUS WITH AND WITHOUT HYPOTHYROIDISM-A COMPARATIVE STUDY

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Background: Thyroid dysfunction and diabetes mellitus are the two common endocrine disorders. Type 2 Diabetes Mellitus usually associated with dyslipidemia, which increases the risk of cardiovascular disorders. The prevalence rate of thyroid dysfunction is much higher among diabetic population.

Aim: To study relationship between dyslipidemia in type 2 diabetes mellitus patients with hypothyroidism and without hypothyroidism.

Methods: This is an cross sectional study conducted in the Department of General Medicine, Mayo Institute Of Medical Sciences, Barabanki, during a period of 1year from March 2021 to February 2022, to study dyslipidemia among 100 patients of type 2 diabetes mellitus patients, of those with Group 1: with hypothyroidism(50 patients) and Group 2: without hypothyroidism(50 patients).

Result: The mean age of study population was 50.70 ± 10.10 years, with gender ratio of 1.22 (Males 55% and Females 45%). BMI of hypothyroid T2DM patients was significantly higher than that of euthyroid patients (29.5±5.0 vs 27.3±4.2 kg/m2). Dyslipidemia (Abnormal TC/TGL/HDL/LDL/VLDL) was observed in 75 T2DM patients with significantly higher proportion of T2DM hypothyroids as compared to euthyroids (84% vs 66%). Proportion of T2DM Hypothyroid patients was significantly higher as compared to Euthyroid having abnormal Total cholesterol (60.0% vs. 38.0%), Triglycerides (80.0% vs. 56.0%), HDL (40.0% vs. 16.0%) and VLDL (80.0% vs. 56.0%).

Conclusion: There was significant difference in lipid profile parameters between single and double morbidities. Low thyroid function was positively associated with a lipid dysregulation in patients with T2DM. So that we recommend

and both hypertension+T2DM group.

screening for thyroid disease to detect subclinical or clinical hypothyroid among diabetics.

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STUDY OF RENIN ANGIOTENSIN SYSTEM (RAS) GENES POLYMORPHISM IN the PATIENT WITH HYPERTENSION & TYPE 2 DIABETES MELLITUS

Utkarsh kimmatkar

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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. However, the results of the studies that investigated different populations were not consistent . 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. Given this background, the present study aimed to study the association between Renin Angiotensin System (RAS) Genes polymorphism with hypertension & type 2 diabetes mellitus.

Aim: To study the association between Rennin Angiotensin System (RAS) genes polymorphism with Hypertension & Type 2 Diabetes Mellitus.

Methods: 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 ($p>0.05$). However individually TC genotype showed in significantly High proportion in T2DM cases. 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

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Blood pressure data of rural areas of India

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Global Touch International

Background: No reliable data for rural areas of India is available

Aim: To ascertain reliable data of different parts of the country through Volunteer Health professional Associates from Global Touch International (GTI) in different parts of India , in association with Indian Society of Hypertension
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Methods: In most of the cases digital Blood Pressure Monitor (OMRON) was used for recording blood pressure data at a fixed time after making the respondents comfortable in siting position. Age sex composition, physical activity, food habit and socioeconomic status of the respondents were noted.

Result: A total of 409 (2o9 females and 200 males) were studied. Seventy percent of studied population belonged to lower middle class and more than 75% of the population was non vegetarian. Systolic blood pressure for males ranged from 90 to 178 mm of Hg and for females it was 90 to 250 mm of Hg and the average was 132.4 mm of mm of Hg.

Diastolic blood pressure ranged from 50 to 110 mm of Hg for males and for females it was 60 to 130 mm of Hg; the average being 83.8 mm of Hg. Association of blood pressure values with physical activity, food habit or socioeconomic status was observed.

Conclusion: there is a need for conducting the study in all parts of India to have reliable data.

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A COMPARATIVE STUDY OF METABOLIC SYNDROME AMONG DIABETIC AND NON DIABETIC POPULATION AT A TERTIARY CARE HOSPITAL

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Background: Metabolic syndrome "Syndrome X " coined by Reaven, is a constellation of abnormalities of glucose intolerance, hypertension, low HDL cholesterol, raised triglycerides, and hyperinsulinemia and its incidence in the diabetes mellitus population leads to disease progression into various complications that aggravate the morbidity using NCEP-ATP III criteria.

Aim: To compare the incidence of metabolic syndrome in the diabetic and non-diabetic population

Methods: A study was conducted at a tertiary care hospital from March 2021 to Feb 2022 by collecting data from 50 diabetics and 50 non-diabetic patients. The study was conducted in form of a questionnaire, anthropometric measurement, clinical examination, and relevant investigations in the Department of General Medicine.

Result: A study sample of 50 non-diabetic patients (control) and 50 type 2 diabetes(case) were undertaken to study the incidence of metabolic syndrome. The study group (case-control) was matched with age, gender, and BMI along with the duration of diabetes and duration of hypertension. 26 males and 24 females were included in both case and control groups. The mean duration of diabetes was more than 5 years. Hypertension was higher(75%) in the case group whereas around 30% in the control group. Incidence of metabolic syndrome is significantly associated with subjects having dyslipidemia, CAD, and hypertension, and is not statistically associated with BMI and gender. The incidence of metabolic syndrome was positively associated with increasing age.

Conclusion: The incidence of metabolic syndrome increases as the duration of diabetes increases and with worsening glucose tolerance, as reflected by high HbA1c levels. Hypertension and raised triglyceride levels are prevalent in diabetics with metabolic syndrome. However, neither waist circumference nor BMI criteria were present in all subjects with metabolic syndrome. So, patients with metabolic syndrome should be counseled for lifestyle modification along with medical therapies to prevent diabetes and its macrovascular and microvascular complication.

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A STUDY OF CARDIO-RESPIRATORY INVOLVEMENT IN PATIENTS OF INFECTION WITH SARS-COV-2

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Background: SARS-CoV-2 virus can damage respiratory, cardiovascular, gastrointestinal, urinary and central nervous system by various mechanism. Common complications in the respiratory system are Acute Respiratory Distress Syndrome and Type 1 Respiratory Failure while in cardiac system, the common complications are acute cardiac injury, heart failure and conduction abnormalities.

Aim: To study cardio-respiratory involvement in patients with SARS-CoV-2 infection.

Methods: This was an observational cross-sectional study including 60 patients of age >18 years of either sex presenting to GTB Hospital diagnosed as positive for SARS-CoV-2 by RT-PCR and/or Rapid Antigen Test and belonging to moderate and severe category as per guidelines of Government of India, Ministry of Health and Family Welfare. The hospital-based prevalence of cardio-respiratory involvement was calculated and type of cardiac and respiratory involvement was assessed.

Result: Cardiovascular involvement was present in 25% patients. Cardiac involvement included Acute Coronary Syndrome including STEMI (3.3%), NSTEMI (10%), unstable angina (1.67%), left ventricular hypertrophy (8.3%), conduction abnormalities like bundle branch block (3.3%), atrial fibrillation (1.67%) and bradycardia with QT prolongation (1.67%). Raised cardiac enzyme levels positively correlated with ECG abnormalities. Respiratory involvement was seen in 85% of patients including both Type 1 (23.3%) and Type 2 (13.3%) respiratory failure, lung parenchymal involvement with ground glass opacities in bilateral lungs (68.3%), lobar consolidation (6.7%), cavitatory lesion (5%), pulmonary edema (5%), pneumothorax (3.3%), emphysematous changes (3.3%) and bilateral pleural effusion (3.3%). On HRCT there was 56.7% patients in severe category, 41.67% patients in moderate category and 1.67% patients in mild category.

Conclusion: Acute coronary syndrome occurs frequently in patients with SARS-CoV-2 and associated with complications like congestive heart failure, bundle branch block, atrial fibrillation, bradycardia and heart block. Parenchymal infection including pneumonia and acute lung injury are the most frequent type of involvement of respiratory system and ground glass opacities are the commonest finding on CT scan.

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A STUDY OF PRECIPITATING RISK FACTORS, CLINICAL PRESENTATION & OUTCOMES OF DIABETIC KETOACIDOSIS IN TYPE 2 DIABETES MELLITUS

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Background: Diabetic Ketoacidosis is an acute metabolic complication classically seen in patients with Type 1 Diabetes Mellitus. Although rare, it may occur in patients with Type 2 Diabetes Mellitus as well.
Aim: Aim of the study was to look into precipitating risk factors, clinical presentation and outcomes in patients presenting with Diabetic Ketoacidosis of a tertiary care hospital.
Methods: The study is a retrospective study conducted over a period of one year in Muzaffarnagar Medical College & Hospital , Muzaffarnagar, Uttar Pradesh, India. The clinical profile of 10 patients admitted to the Department of General Medicine with diagnosis of Diabetic Ketoacidosis were analysed
Result: In 10 patients, Mean duration of diabetes was 8.6 years. Only 64% were on regular treatment for Diabetes Mellitus whereas 27% were on irregular treatment and 9% were not on any treatment. Infections 50% were the most common precipitating factor for Diabetic Ketoacidosis. Pneumonia being the most common precipitating cause for DKA. Mean fluid requirement was 4.3 litre. Mean insulin requirement on Day 1: 52 units, Day 2: 49 units, Day 5: 52 units and on discharge 52 units. Mean HbA1c 12.6 %. Mean ketosis recovery was 3.5 days.
Conclusion: Diabetic Ketoacidosis is a fatal acute complication of Diabetes Mellitus, if not managed timely. This study has elaborated the clinical spectrum of DKA in T2DM patients. The most common risk factor was infection by Pneumonia followed by irregular treatment. Early diagnosis and treatment can avoid morbidity and mortality.

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ASSOCIATION OF DIABETIC PERIPHERAL NEUROPATHY WITH MICRONUTRIENTS

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Background: Diabetes Mellitus refers to a group of common metabolic disorders that share the phenotype of hyperglycemia1. Due to high level of oxidative stress, mitochondrial dysfunction & inflammation of blood vessels, there may be a greater need for micronutrients, where a diabetic disorder exists. Purpose of this study was to show the association of Diabetic Peripheral Neuropathy with copper, zinc, magnesium & vitamin B-12.

Aim: To see the association between Diabetic Peripheral Neuropathy & Level of micronutrients Among diabetics.

Methods: A cross sectional study was carried out in Department of Medicine, L.L.R.M Medical College Meerut. 130 randomly selected cases of confirmed Type-2 diabetic patients were included in this study. Diabetic Peripheral Neuropathy cases were identified using Michigan Neuropathy screening instrument. Out of 130 diabetic patients, 28 patients were found to have diabetic neuropathy. Level of various micronutrients was assessed and corelated with development of DPN.

Result: Association of Diabetic Peripheral Neuropathy with zinc (P-Value 0.02) & Vitamin B-12 (P-value 0.008) were found to be significant whereas with copper (P-value 0.57) and magnesium (P-value 0.24) were found to be insignificant.

Conclusion: From present study, it may be concluded that altered level of trace elements like Zn, Mg, Vitamin B12 and Cu may have role in pathogenesis and progression of Diabetes Mellitus

The decreased blood levels of Zn, Mg and Vitamin B-12 and increased blood levels of Cu as have been found in present study can be utilized for management of diabetes Mellitus.

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ASSOCIATION OF HEARING LOSS IN CHILDREN WITH CEREBRAL PALSY

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Background: In children with cerebral palsy, due to the delay of brain development or its pathology of development, there may be a later formation of speech function, these children do not understand the speech addressed to them, so their own speech is not formed at a later date.

Aim: Aim of this study is to study the association and determinants of cerebral palsy on hearing loss.

Methods: This was Cross sectional observational study over a period of one year. Confirmed cases of cerebral palsy, Age 6 months to 10 years; irrespective of sex were included.

Result: The subject group consisted of 109 children, 80 (73%) males and 39 (27%) were females, ranging from 6 months to 10 years of age with a confirmed diagnosis of cerebral palsy in KGMU paediatric OPD, Lucknow.

The examination of children was carried out by the following methods: clinical examination of patients and functional research methods of the BERA analyzer.

The data obtained revealed a bilateral lesion of the peripheral part of the bera analyzer. Beilateral sensorineural hearing loss was detected in no of patients is 12 severe, 8 moderate and 4 mild. Changes in the main parameters of BAEP were detected in the study of the stem structures of the bera analyzer in children with cerebral palsy. Thus, disorganization, configuration disturbances of the component composition were noted as mild, moderate, severe.

Conclusion: Thus, the study revealed a disorder of auditory function by sound-detecting type and bera, justified the need for hearing correction in these children. Evaluation of auditory function made it possible to determine the level of auditory injury and localization of the process from the results of a complex, objective examination.

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ASSOCIATION OF NEUTROPHILS/ LYMPHOCYTES RATIO AND CRP WITH SPIROMETRY IN COPD PATIENTS

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Background: Chronic obstructive pulmonary disease (COPD) is a critical public health burden. The neutrophil to lymphocyte ratio (NLR) and C-Reactive protein (CRP), an inflammation biomarker, has been associated with COPD morbidity and mortality; however, their associations with lung function decline and COPD development are poorly understood. The present study assess the association of N/L ratio and CRP with Spirometry in COPDpatients.

Aim: Study of the association of N/L ratio and CRP with Spirometry in COPD patients
Methods: In this cross sectional study, total 100 COPD diagnosed pateintswith pulmonary function test according to GOLD (Global Initiative COPD patients)were enrolled as per inclusion-exclusion criteria. Along with basic demographical details, hematological testing and spirometry were done.
Result: Among 100patients, 57 were male and 43 were female with mean age of 65.25±7.52 years. A 1-unit increase in NLR was associated with statistically significant mean (SE) decreases of 0.023±0.006 L in FEV1, 0.018 ±0.006) L in FVC, 0.300% ±0.007 L in FVC, 0.300% ±0.068% in FEV1/FVC, and 3.67±0.918 L/min MMEF. Furthermore, increase in NLR was associated with 10% higher odds of COPD for all visits and 27% higher risk of incident COPD (odds ratio, 1.23) for participants without COPD at baseline. CRP level was also significantly increase in COPD patients
Conclusion: The results imply that NLR and CRP may be clinically significant biomarkers associated with a high probability of lung function decline and COPD.However further multicentric studies will be needed to increase the reliability of the present findngs.

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AVASCULAR NECROSIS OF HIP AFTER COVID-19 INFECTION

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Background: The course of covid-19 is still under analysis. The adverse effect of the viral fever on bone and joint tissue has also been observed.

Aim: Management protocol in post- covid complication of avascular necrosis (AVN) with hyperbaric oxygen therapy (HBOT) and core decompression.

Methods: We present a group of 10 patients with degeneration of hip ,with a background of avascular necrosis after infection with the COVID 19 virus. In MR imaging, changes in the characteristics of AVN were documented.

Result: Observation of this group showed a clear correlation among the history of covid-19 disease in the patient, moderately severe symptoms, high levels of IgG antibodies, and the time of occurrence of joint changes. No other risk factors for AVN or autoimmune or degenrative disease were found in the study group. The group of patients responded well to HBOT and core decompression with symptomatic treatment.

Conclusion: During coronavirus (covid -19) infection, there are complications in the locomotor system, such as microembolism and formation of AVN ; hence , more research is needed.

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CLINICAL SIGNIFICANCE OF PRO INFLAMMATORY ADIPOKINE WNT-5A AND ANTI-INFLAMMATORY ADIPOKINE SFRP-5 LEVELS IN METABOLIC SYNDROME PATIENTS IN A TERTIARY CARE HOSPITAL.

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Background: Metabolic Syndrome (MetS) is a multifactorial heterogenous disorder resulting in a variety of clinical manifestations and considered as a leading global health threat .

MetS have been characterized as chronic “inflammatory” states that are associated with abnormal concentrations of cytokines, acute-phase reactants and other inflammatory signaling marker.

Aim: 1) To assess the comparative serum level of Secreted frizzled-related protein 5 (Sfrp5) and Wnt member 5a (Wnt5a) in patients of metabolic syndrome and healthy control.

2) To find out the correlation of individual plasma Sfrp5 and Wnt5a level with the ri

Methods: 1) Patients registered in the OPD of the department of Medicine were enrolled in this study according to the inclusion and exclusion criteria.

2) The study included 50 diagnosed patients with metabolic syndrome and 50 healthy control.

3) Patients having age between 18-70 years and blood pressure more than 140/90 mmhg were included in the study .

4) Anthroprometric measurements like BP, BMI, WC and the biochemical parameters such as FPG, Lipid profile were measured accordingly of each enrolled patients respectively.

5) Lipid profile was done by using selectra autoanalyser and relevant kits while blood sugar level was estimated by GOD-POD method

Result: The risk factors such as Age , gender, Total cholesterol and LDL had non significant values and risk factors like SBP. DBP, WC, FPG, Triglycerride and HDL had significant P values

Conclusion: 1) Serum Sfrp5 level was significantly lower in MetS patients than in control subjects.

2) Wnt5a level was not significantly different in cases and controls.

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DEPRESSION AMONG MEN AND WOMEN WITH DIABETES: A COMPARATIVE STUDY

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Background: People with diabetes mellitus are two to three times more likely to have depression, with the majority of instances going undiagnosed. They may also be more prone to psychological distress in general, including depression. Additionally, stress has the ability to affect brain volume and is a known risk factor for the development of high blood pressure, and CVD.

Aim: To compare the levels of depression between diabetic men and women.

Methods: This pilot study was conducted on 50 (25 males + 25 females) diabetic 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: Results showed that 12% females and 30% males were not depressive. 50 % of females and 56% of males were found to have mild depressive, whereas 22% females and 12% males were moderate depressive. While severe depression was found in 16% females and 2% males.

Conclusion: In comparison to diabetic male patients, the majority of female patients had mild to moderate depression. Healthcare professionals need to use effective defense techniques, such as establishing psychological contact with patients, including family and friends as part of social support and patient empowerment, and also need to raise awareness, conduct routine monitoring, and consult with doctors regarding the entire process of managing diabetes. For this investigation, a large sample size should be used to get more reliable results.

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EFFECT OF OBESITY ON AUTONOMIC FUNCTIONS IN A TERTIARY CARE CENTER OF NORTHERN INDIA

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Background: Obesity is the most emerging problem in today's time. It is responsible for many metabolic as well as psychological ailments. Obesity and autonomic involvement have been studied, but evidence regarding the same is controversial. Autonomic dysfunction can be assessed by various techniques, including heart rate variability (HRV), heart rate recovery (HRR), sympathetic skin response (SSR), and R-R interval variation (RRIV).
Aim: To study the relationship between obesity and autonomic function tests.
Methods: This was a cross sectional study conducted in Department of Physiology, King Georges Medical University, Lucknow in collaboration with Department of Medicine, KGMU, Lucknow. Total 100 volunteers in the age group of 18–25 years.
Result: Total 100 volunteers in the age group of 18–25 years. 50 of the subjects were included in the obese group, body mass index (BMI >30 kg/m2) and the other 50 were included in the non-obese group (BMI < 30 kg/m2). Low frequency/HF was significantly altered in the obese group (P<0.05). SDNN was significantly lesser in obese when compared to non-obese (P <0.05). SSR latencies and amplitudes when compared between obese and non-obese did not reveal statistically significant results. However, both SSR amplitude and latency were lesser in the obese group when compared to non-obese. Tests indicate decreased parasympathetic activity in obese individuals.
Conclusion: Obesity and autonomic dysfunction can be correlated. Lifestyle modifications in the form of long-term exercise program, healthy diet is the need of the our in the present era. This, in turn, may help in preventing cardiovascular morbidity which, in turn, reduces the burden on the society as a whole.

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EFFECT OF YOGIC EXERCISE OVER BLOOD PRESSURE IN APPRANTLY HELTHY SUBJECTS

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Background: Regular exercise and yogic meditation have positive impact on physiological and psychological status of the body. Important risk factor and marker for hypertention is
Urbanisation and sedentary life with increasing stress
Substance abuse result in increased risk of hypertension in day to day life .Regular meditation and yoga have much reduction in blood pressure and improvement in heart rate variability
Aim: Regular meditation & yoga help in reduction in blood pressure & improvement in heart rate variability

Methods: Study was done in department of physiology KGMU, Lucknow
Subjects were 80 apparently healthy adults in age group of 20-45 years
Subjects were selected and categorized on basis of BMI and their basal blood pressure was recorded
After 6 month of regular yogic exercise (SURYANAMASKAR) again blood pressure was recorded with standard protocol and compared with basal parameters

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 & yogic meditation has positive impact on cardiovascular health & may be good preventive measures to control the hypertension

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LATE NIGHT EATING OR CIRCADIAN DISRUPTION COULD BE MORE DANGEROUS THAN OUR THINK FOR HUMAN BEINGS

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Background: Our bodies function optimally when we align our eating & sleeping patterns with our circadian rhythms, the innate 24-hour cycles that tell our bodies when to wake up, when to eat and when to fall asleep. Chronically disrupting this rhythm by eating late night meals & sleep could be a recipe for Hypertension, CVD, and metabolic trouble.

Aim: The aim of this study is to investigate whether there was a relationship between morningness(MC) (110n) intermediate(IC) (100n) & eveningness chronotype(EC) (35n) in T2DM.

Methods: A total of 245 subjects' age 18 to 60 years were recruited in Clinical OPD of General Medicine, KGMU. We have tested FBG & PP level, lipid profile HbA1c, Insulin, Leptin and Cortisol level, 48 hours ABPM.

Result: When we compared these 3 groups, Significant Different parameters found in FBG (P = 0.01) Postprandial (P = 0.03) HbA1c (P = 0.001) TG (P = 0.0001), Total Cholesterol (P = 0.01) & VLDL (P = 0.005). It also shows the complete inversion of the cortisol level (0.003). Insulin, IL-1 beta & IL-6 also show significant change in late night eating T2DM Patients. Systolic / Diastolic readings of ABPM shows significant change between MC and IC (0.005) but not b/w EC & IC (0.007). And for reliability of sleep by actigraphy shows MC (6:15 + 1:35) & EC (8:18 + 1:23) take complete sleep but IC total sleep hours (5:10 + 1:05) are very less

Conclusion: Evenininngness & Intermediate Type Patients are more likely to have late night eaters & are associated with greater risk of Metabolic Disorders like Blood Pressure Variability, Dyslipidemia, T2DM & CVD.

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MUSCULOSKELETAL COMPLICATIONS IN TYPE-2 DIABETICS VERSUS NON-DIABETICS

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Background: Prevalence of diabetes has increased over the years. Diabetic complications can be both acute (hyperglycemia, hypoglycemia) and Chronic (retinopathy, nephropathy, neuropathy, hyperinsulinemia).A number of musculoskeletal complications have been linked to type-2 diabetes, but the most common ones are Adhesive-capsulitis (frozen shoulder), Carpal tunnel syndrome, Duyputrens-contracture, tendinitis, Diabetic-Cheiroarthropathy (Stiff-hand syndrome). They cause limited joint mobility and are important to detect as they affect quality of life.

Aim: Calculate the percentage of distribution of musculoskeletal complications in type 2 diabetics and non-diabetics, namely: adhesive-capsulitis, diabetic-cheiroarthropathy, duyputrens-contracture, tendinitis and carpal tunnel syndrome.

Methods: After informed consent, patients were recruited from the KGMU OPD, presenting with these musculoskeletal complications.patients were screened for type-2 diabetes using standard screening procedures: fasting, post-prandial blood glucose and HbA1c.

Patient's history was taken according to the questionnaire.

Based on history, anthropometric-parameters and biochemical-screening,200 diabetics and 200 non-diabetics were recruited. In each group, distribution of musculoskeletal complications was assessed.

Result: Out of 400 study participants,200 type 2 diabetics and 200 non-diabetics were screened. In type-2 diabetics: Adhesive shoulder capsulitis was the commonest complication, seen in 82 patients, tendinitis in 52 patients, duyputrens-contracture in 40 patients,carpal tunnel in 22 and diabetic-Cheiroarthropathy in 4.

In non-diabetics: adhesive capsulitis was seen in 80 subjects, tendinitis in 90 subjects, duyputrens-contracture in 10 subjects,carpal-tunnel in 15 and 5 subjects of diabetic cheiroarthropathy.

Conclusion: This shows a high prevalence of musculoskeletal disorders in type 2 diabetics as compared to non-diabetics. And amongst these complications also, adhesive shoulder capsulitis is the commonest.

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NON INVASIVE PREDICTORS OF OESOPHAGEAL VARICES IN LIVER CIRRHOSIS

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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 futiure 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 centres.

Aim: To assess 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 ascitis is recorded. Upper GI endoscopic findings in all these patients for oesophageal varices and its grade is being recorded. Hospital based cross sectional study done. We assesed APRI score, PC/SD and SAAG as non invasive predictors of oesophageal varices in cirrhotic patients

Result: APRI score > 1.815 (p value 0.01) , SAAG > 1.1 g/dl (p 0.006) and PC/SD <= 909 (p 0.023) are statistically significant for oesophageal varices in liver cirrhosis . Order of prediction by applying ROC curves APRI score > PC/SD > SAAG . Within the 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 reduces cost of health care , lowers the risk of invasive procedure in liver cirrhosis patients.

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STUDY OF INFLAMMATORY MARKERS IN ACUTE ISCHEMIC STROKE

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Background: I
Background: Acute Ischemic Stroke is an important cause of morbidity and mortality. An inflammatory condition plays a vital role at all stages of the ischemic cascade. It is seen that the main mechanism involved in neuronal damage in ischemic stroke is oxidative stress and inflammatory reaction. So inflammatory markers can be used to assess the severity and outcome of acute ischemic stroke.
Aim: To study the role of inflammatory markers in Acute Ischemic Stroke
Methods: Materials and methods: This case-control study was conducted in a tertiary centre on 30 cases(acute ischemic stroke patients) and 30 controls(healthy individuals). On the day of admission, NIHSS score was calculated to assess stroke severity and blood samples were processed for serum IL-6, CRP and ferritin levels. The outcome of stroke was measured on the 7th day and 1 month using Barthel index and mRS score respectively. All patients were evaluated for hemorrhagic transformation.
Result: Results: Our study showed that Serum levels of IL-6, CRP and ferritin were significantly higher in cases as compared to controls. The mean il-6 ,CRP and ferritin in cases were 69.01‡54.96pg/ml, 28.88+26.77mg/1 and 194.86+108.65 ng/ml respectively whereas in controls the mean value were 10.95‡6.97pg/ml, 5.62‡2.51mg/land 91.76+111.10ng/ml respectively. There was a significant positive correlation between the inflammatory markers(IL-6, CRP and ferritin and NIHSS score with rho-0.45,p-0.012 for IL-6, rho-0.64, p-<0.001 for CRP and rho-0.48.p-0.007 for ferritin. Similarly there was significant correlation of il-6 (rho-0.38,p-0.039), CRP (rho-0.48,p-0.007) and ferritin (rho-0.38,p-0.036) with mRS. Correlation of inflammatory markers (CRP and ferritin) with Barthel index was also found statistically significant (rho-0.47,p-0.016 and rho-0.44,p. 0.026 respectively).There was a significant association of inflammatory markers(CRP and ferritin) with the size of the infarct. Increased Ferritin was significantly associated with hemorrhagic transformation (p-0.021).
Conclusion: Conclusion: In our study, we concluded that IL-6, CRP and ferritin levels are associated with the severity and outcome of stroke. This study substantiated that a higher level of serum ferritin is associated with an increased risk of hemorrhagic transformation.

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TO STUDY THE CORRELATION OF SOFA SCORE WITH SEVERITY SCORE ON HRCT CHEST IN SEVERE SARS CO-V-2 INFECTION

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Background: Covid-19 has put immense pressure on health care delivery system globally. Although respiratory system is primarily involved but severe Covid-19 disease is not limited only to pulmonary dysfunction. Involvement of other systems like cardiovascular, renal, nervous, gastrointestinal etc. are very well documented in severe Covid-19 disease. Development of ARDS, sepsis, hyper-coagulable state and multi organ dysfunction were the reasons which contributed to high mortality rate seen in Covid-19 epidemic. Early identification of underlying sepsis, multi organ failure and pulmonary dysfunction determined the prognosis of the patients.

Aim: To study the correlation of SOFA score with severity score on HRCT chest in patients of severe SARS Co-V-2 infection.

Methods: This is a prospective observational study conducted in a tertiary care centre. 43 RTPCR positive patients of SARS CoV-2 infection between age 18yrs to 60yrs falling under severe category were recruited in this study. CT severity score on HRCT chest, inflammatory markers and SOFA score were calculated at the time of presentation and their correlation was studied.

Result: The median SOFA score in our study was 2 (IQR:1-4). The median value of SOFA in patients with CTSS>/= 16 was 3 (IQR:2-5) whereas median SOFA score was 1(IQR:0-1) in patients with CTSS<16 (p value <0.001). The median value for IL-6 and S. Ferritin was 23(pg./ml) and 326(ng/ml) respectively, both above the normal range. Increased level of CRP(>6pg./ml) was seen in 70% of the study population. The Spearman correlation coefficient for IL-6 & CTSS was 0.902 and for IL-6 & SOFA was 0.936 and both were statistically significant (p value <0.001). The median IL-6 value in individuals with CTSS>/=16 was 27.3(pg./ml) whereas median IL-6 was 4.6(pg./ml) in individuals with CTSS<16 (p value<0.001). 28 individuals with CTSS>/=16 had raised CRP (>6pg./ml) in contrast with 2 with CTSS<16.

Conclusion: Severe Covid-19 is a multi systemic disease with higher extent of pulmonary involvement and raised inflammatory markers (IL-6, CRP, S. Ferritin). SOFA score had a strong positive correlation with severity score on HRCT chest. Inflammatory markers (IL-6, CRP) also showed a positive correlation with SOFA score and CTSS. The severity score on HRCT chest was significantly higher in severe Covid-19 patients but high CTSS was not independently related to mortality.

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ROLE OF SGLT2 INHIBITOR IN AMELIORATING GLUCOTOXICITY IN RECENTLY DIAGNOSED CASES WITH TYPE2 DIABETES WITH MODERATE TO SEVERE HYPERGLYCEMIA (HBA1C >8.5)

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Background: The burden of diabetes is high and increasing globally, and in developing economies like India, mainly fueled by the increasing prevalence of overweight/obesity and unhealthy lifestyles. The estimates in 2019 showed that 77 million individuals had diabetes in India, which is expected to rise to over 134 million by 2045. Approximately 57% of these individuals remain undiagnosed. Type 2 diabetes, which accounts for majority of the cases, if untreated can lead to multiorgan complication. Due to the increase of type 2 diabetes (T2D), the number of patients in treatment with multiple anti-diabetic agents is increased. According to the recent recommendation of treatment guidelines, sodium-glucose cotransporter 2 (SGLT2) inhibitors would be used as additional treatment to the currently administered anti-diabetic drugs for poorly controlled T2D patients. Here, we assessed the efficacy of SGLT2 inhibitors added to the current treatment with metformin or metformin plus dipeptidyl peptidase-4 (DPP4) inhibitors in recently diagnosed cases with type2 diabetes with moderate to severe hyperglycemia (HbA1c >8.5).

Methods: Our study was carried out on 39 healthy volunteering recently diagnosed type 2 diabetics (28 male and 11 female) with moderate to severe hyperglycemia patients who reported to the Department of Endocrinology, LLRM Medical college and hospital, Meerut. All patients underwent HbA1c estimation at first visit. Patients were enrolled in three groups. Patients with significant hyperglycemia with HbA1c between 8.50-9.49 % were started on dual therapy with metformin (starting with dose of 1000 mg/day and gradually increased upto 2000 mg/day) and SGLT-2 inhibitors (either tablet dapagliflozin 10 mg OD or tablet remogliflozin 100 mg BD). Patients with HbA1c > _9.5 were started on triple therapy with tablet metformin (starting with dose of 1000 mg/day and gradually increased upto 2000 mg/day), DPP-4 inhibitors(either tablet tenegliptin 20 mg OD or tablet vildagliptin 50 mg BD) and SGLT-2 inhibitors (either tablet dapagliflozin 10 mg OD or tablet remogliflozin 100 mg BD). Patients who were not controlled despite using three drugs, were additionally put on tablet glimepiride 1 mg/day (quadraple therapy group). At 2 nd visit after 3 months of treatment, all patients again underwent HbA1c analysis. All data are presented as mean ± SEM. Student t-test was used for two-group comparisons. All statistical tests were two-tailed, with values of 0.05 being considered statistically significant.

Result: Thirteen (13) patients were treated with dual therapy (tablet metformin and SGLT2 inhibitors), twenty three (23) patients were treated with triple therapy (metformin , DPP-4 inhibitors and SGLT2 inhibitors), and the three (3) patients were treated with the quadraple therapy(tablet metformin, DPP-4 inhibitors and SGLT2 inhibitors and glimepiride). HbA1c levels at the first visit were approximately the same among the three groups; 11.24 ± 1.97 % in the dual therapy group, 11.20± 1.83% in the triple therapy group, and 11.63 ± 2.30% in the quadraple therapy group. Addition of SGLT2 inhibitors improved HbA1c levels to 8.0 ± 2.08 % (statistically

significant, p value=0.002) in dual therapy group and 7.47 ± 2.37% (statistically significant, p value=0.000) in triple therapy group. Addition of glimiperide decreased mean HbA1c to 6.33± 0.20% in quadraple therapy group(statistically non-significant, p value=0.456) .

Conclusion: thus it can be concluded that the addition of SGLT2 inhibitors to metformin or metformin plus DPP4 inhibitors significantly ameliorate the glucotoxicity in recently diagnosed patients with moderate to severe hyperglycemia.

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A RARE CASE OF POST-PARTUM HELLP SYNDROME IN NORMOTENSIVE PATIENT COMPLICATED WITH ACUTE KIDNEY INJURY AND ASCITES – A BATTLE WON BY A MOTHER

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Background: HELLP Syndrome is an acronym for

H - Hemolysis

EL – Elevated Liver Enzymes

LP – Low Platelet Count

It probably represents a severe form of pre-eclampsia. HELLP develops in approximately 0.1–0.8% of pregnancies overall and as many as 15–20% of patients with HELLP syndrome do not have antecedent hypertension or proteinuria. HELLP Syndrome is a life threatening condition which if not treated properly can cause mortality.

Aim: a rare case of post-partum hellp syndrome in normotensive patient complicated with acute kidney injury and ascites – A battle won by a mother

Methods: Case Report

Result: Recovery and diagnosis of a 22 years old female patient diagnosed as a case of HELLP syndrome with a normotensive history and complicated with Acute Kidney Injury and Ascites

Conclusion: HELLP syndrome is a rare disease of pregnancy and post-partum period. There is a high mortality rate associated with HELLP syndrome. Early diagnosis and aggressive managed can prevent HELLP related morbidities and mortality.

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A RARE CASE OF SIMULTANEOUS DEVELOPMENT OF ALOPECIA AERATA UNIVERSALIS AND IDDM

DR SABEEHA NOOR
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RESIDENT DOCTOR, JUNIOR RESIDENT, Associate Professor

Background: Type 1 diabetes is chronic autoimmune disease characterized by insulin deficiency and resultant hyperglycemia .

Alopecia universalis is an uncommon form of alopecia areata involving hair loss over the entire body including eyebrows and body hairs, such as face, pubic area chest, underarms, legs,.

Severe form of alopecia aerata ,thought to be of autoimmune condition. About 1-2% people who develop alopecia areata show progression to alopecia universalis.-A 24 year old male pt presented to medicine outpatient department with 10 years history of diagnosed case of type 1 DIABETES MELLITUS .

Pt was diagnosed as a case of dm 10 years back .at that time he was prescribed oral hypoglycemic agents and later was shifted on insulin subcutaneous injections.

2 years back patients started complaining of patchy hair loss in nape of the neck which progressed to the whole scalp and later progressed towards eyebrows and further to whole body hair loss.

Aim: To study the realtion of alopecia aerata universalis and IDDM

Methods: CASE STUDY

Result: IDDM is occasionaly complicated by alopecia areata .The autoantibodies to the islets and lymhocytic infilteration of islets is seen in IDDM and lymhocytic infilteration to the hair follicles is often present in alopecia aerata universalis

Conclusion: Insulin dependent diabetes mellitus is occasionally complicated by alopecia areata and diabetes mellitus is relatively common in patients with alopecia areata .Both disease state have been described as manifestation of multiple endocrine autoimmune syndrome .Although alopecia areata totalis or universalis may occur in patients with insulin dependent diabetes mellitus, simultaneous development of both diseases seems to be very rare .The autoantibodies to the islet cells and lymphocyte infiltration into islets is seen in humans. Alopecia areata and its severe forms alopecia areata totalis and universalis are also related to autommunity because lymphocyte infiltration to the hair follicles is often present.

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A RETROSPECTIVE STUDY:DYSLIPIDEMIA IN PATIENT WITH TUBERCULOSIS AND DIABETES MELLITUS AT TERTIARY HOSPITAL IN NORTH INDIA

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Background: Relationship between DM and mycobacterium tuberculosis
Aim: To determine the prevalence of dyslipidemia in patient with mycobacterium tuberculosis infection in DM .
Methods: A retrospective study done on 130 patient infected with MTB were enrolled in the study.Patient with TB selected from medicine and pulmonary medicine department in mln medical college prayagraj.Patient divided into two categories on basis of glucose tolerance abnormal Glucose tolerance(AGT), and normal glucose tolerance (NGT).
Result: A total 130 patient with TB were taken in the study 67 patient with AGT group and 63 patient in NGT group.The mean age of AGT was 51.17y. Among AGT and NGT Dyslipidemia found to be statistically significant among AGT group (p=0.01). Mean serum triglycerides (209.1, p=<0.04)and Ldl cholesterol (144.3,p<0.001) in AGT group .
Conclusion: Patient with TB DM are more prone for dyslipidemia

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CHRONOBIOLOGY AT WORK: EFFECT OF TIME RESTRICTED MEAL (TRM) INTAKE ON ANTHROPOMETRIC, BIOCHEMICAL AND LIPID PROFILE PARAMETERS IN PATIENTS OF TYPE 2 DIABETES MELLITUS

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Background: Daily cyclical changes in light and darkness result in diurnal rhythms in other environmental parameters such as temperature and humidity.

Aim: 1.To study the effect of TRM on anthropometric parameters in patients of Type 2 diabetes mellitus.

2.To study the effect of TRM on biochemical parameters in patients of Type 2 diabetes mellitus.

3.To study the effect of TRM on lipid profile parameters in patients of Type 2 diabetes mellitus.

Methods: 400 diabetics enrolled from OPD, Endocrinology, KGMU were randomly divided based on whether they have consented (TRM(time restricted meal),case group) or not (control group).Baseline parameters were recorded and follow up was done at 6,12 and 18 months for anthropometric measurement, height, weight, waist hip ratio, aBSI, neck size, blood sugar (Fasting and post prandial), HbA1C and lipid profile. A single intervention was done that the timing of dinner was at or around 7 in the evening for the TRM group.

Result: In the TRM group mean age was 47.17 in the control group 46.97

TRM group Mean height = 1.58 control group Mean = 1.59

BMI TRM group mean=27.84 control group mean = 28.82

Neck size (in centimetres) TRM group 36.56 mean control group=40.59

Waist size (in centimetres) TRM group=91.70 mean control group= 91.85

Hip Size (in centimetres) TRM group= 101.32 mean control group=107

HbA1c TRM group= 7.89 mean control group=8.23

Total Cholesterol TRM group= 163.32 mean control group=183.2

Triglycerides TRM group=106.07 mean control group=152.6

LDL C TRM group= 63.99 mean control group= 93.49

HDL C TRM group= 53.64 mean control group=50.93

VLDL C TRM group=25.98 mean control group=31.08

This is the final result after one and a half year of follow up. A detailed version regarding baseline, 1st follow up, 2nd follow up and 3 rd follow up will be presented at the conference.

Conclusion: Our study is the first of its kind which has been conducted in north Indians

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CORONARY ARTERY CALCIUM SCORE AS A PREDICTOR OF CARDIOVASCULAR RISK IN ASYMPTOMATIC PATIENTS OF TYPE 2 DIABETES

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Background: Diabetes mellitus has assumed the status of an epidemic in the last century. High prevalence of diabetes in South Asian population and presence of other cardiovascular risk factors in this region, make up the relationship between coronary artery disease (CAD) and diabetes more pronounced.Coronary artery calcium scoring (CACS), owing to its non-invasive nature and a relatively high sensitivity holds promise as a good screening tool for detection of CAD in asymptomatic patients. Hence, a cross sectional study was carried out to estimate coronary artery calcium scores in type 2 diabetics who were asymptomatic (for CAD) at the time of recruitment.

Aim: To carry out a cross sectional study and to estimate coronary artery calcium scores in type 2 diabetics who are asymptomatic (for CAD), and to study correlation of CACS with duration of diabetes and with conventional CAD risk factor.

Methods: 140 type 2 diabetes mellitus patients < 60 years who were asymptomatic for CAD at presentation were recruited and coronary artery calcium scoring via CT scan was performed.

Result: The prevalence of CAD risk as assessed by coronary artery calcium scores was 35.7% in our study population. Duration of diabetes and smoking showed a significantly increased CAD risk by having greater severity of coronary calcification. A significant correlation between angiography findings and coronary artery calcium scores was also seen ($p<0.001$).

Conclusion: This cross sectional study shows that there is a high prevalence of coronary artery disease even in asymptomatic and relatively young diabetic population and coronary artery calcium scoring can be a useful and noninvasive method for measurement of this subclinical risk.

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DYSLIPIDEMIA ASSOCIATION WITH CLINICALLY SIGNIFICANT MACULAR EDEMA IN TYPE 2 DIABETES MELLITUS

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Background: Dyslipidemia is one of the major risk factors for cardiavascular disease in Diabetes mellitus.Diabetes mellitus dyslipidemia mostly has high plasma triglyceride , low HDL cholesterol, increased LDL cholesterol. These Lipid changes cause free fatty acid flux secondary to insulin resistance and inflammation which can cause clinically significant CSME in patient with Diabetic Retinopathy
Aim: To determine the association between lipid profile and clinically significant macular edema (CSME) in Type 2 diabetes
Methods: 70 patients of type 2 diabetes mellitus were divided into 2 groups i.e. Group 1 of 14 patients of diabetic retinopathy (DR) with CSME and group 2 of 56 patient of DR without CSME. Ophthalmoscopic and biomicroscopic examination of occular fundus was done and grading of severity of retinopathy was done according to ETDRS classification along with presence or absence of CSME. Lab investigations like fasting serum lipid and profile and HbA1c were done in both the groups
Result: Serum triglyceride levels were found to be significantlly higher in DR with CSME as compared to DR without CSME(p=0.04).
Conclusion: Hypertriglyceridemia is a risk factor for the development of CSME in patients with type-2 diabetes

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EFFECT OF ADVANCED AGE ON BIOACTIVE FACTORS (IL_6&TGF_BETA) IN COLOSTRUM

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

Aim: To study the effect of advanced age on IL-6,TGF-Beta.

Methods: In this case-control study, colostrum specimen were collected from 28 lactating mothers aged >35years(cases)and were compared for bioactive factors(IL-6&TGF Beta) levels with 28 lactating mothers aged 18-35years(controls).Those with h/o chronic illness,systemic illness(DM,HT)and endocrine disorders or on any confounding medication were excluded from the study.Obstetric history was noted.IL-6,TGF-Beta levels in colostrum were assessed using ELISA.Data was compared using Independent 't,-test

Result: Mean age of cases and controls was 36.98+-1.57 and 25.61+-3.15years respectively(p,0.001).no significant difference between the neonates of 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-6 levels in cases were128.54+-63.02pg/ml as compared to 98.10+-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)(p=0.008).

Conclusion: Both IL-6&TGF-Beta levels were higher in colostrum specimen of mothers in advanced age as compared to those aged less than equal to 35years and this difference was statistically significant for TGF-Beta levels.It may be postulated that advanced maternal age could affect the colostrum pro-imflammatory cytokine levels.Studies on larger sample size targeted to study these differences and their clinical impact on post-natal life should be planned.

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EFFECT OF BLACK COFFEE AND GREEN TEA ON PLASMA C-PEPTIDE LEVEL AND FASTING BLOOD GLUCOSE LEVEL IN APPARENTLY HEALTHY ADULTS

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Background: Lots of earlier studies show that Coffee consumption has reduced C-peptide level but the mechanism is not clearly understood. This reduction may be related to other components in coffee rather than caffeine.
In this study, we will examine whether consumption of Black coffee and Green Tea has any effects on secretion of Plasma C-peptide level or not.
Aim: To compare the effect of Black Coffee and Green Tea on Plasma C-peptide level and Fasting blood glucose level
Methods: Case control study, 140 healthy subject will be recruited for the study between the age group 20yrs-30yrs. All subject's Plasma C-peptide level and Fasting blood glucose level will be taken, They will devided into three groups for Black Coffee, Green tea and Lukewarm water, after regularly consuming Black coffee, Green tea and Lukewarm water respectively for 21 days, Again Plasma C-Peptilde level and Fasting blood glucose level will be taken and data will be compared.
Result: Lots of earlier studies show that Coffee consumption has reduced C-peptide level but the mechanism is not clearly understood.
Conclusion: Lots of earlier studies show that Coffee consumption has reduced C-peptide level.

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EFFECT OF ORAL ZINC ON GLYCAEMIC STATUS IN TYPE 2 DM

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Dr Ila pahwa
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Background: A growing body of evidence supports an association between hyperglycaemia and zinc metabolism. Low zinc status is associated with impaired insulin secretion and decreased insulin sensitivity.

Aim: To estimate serum zinc levels at detection of type 2 Diabetes mellitus and to study its effect on glycemic control by analyzing HbA1C in newly diagnosed diabetes

Methods: Newly diagnosed type 2 diabetes patients attending medicine OPD were subjected to FBG, PPBG , HBA1C and serum zinc levels after obtaining their consent to participate in study.

Result: In study of 112 patients , serum zinc levels in most of the subjects in both groups were 75 microgram/dl before zinc supplementation.

The reduction in HBA1c levels was meaningfully more in Zinc supplementation group compared to the placebo

Conclusion: Zinc supplement improves glycemic parameters HbA1C , FBG , PPBG in type 2 diabetes when compared to placebo group.

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FAMILY SUPPORT AMONG TYPE 2 DIABETES MELLITUS PATIENTS AND ITS EFFECT ON SELF CARE PRACTICES: A CROSS SECTIONAL STUDY

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Dr Kauser Usman,
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Professor, Department of Medicine & Officiating Head of Department of Geriatric Medicine, KGMU,
Associate Professor, Department of Biostatistics, SGPGI

Background: Global prevalence of Diabetes is 9.3 percent. In India prevalence of diabetes in adults is 8.9 percent. There is significant burden on the patient, both physically and psychologically. Self care practices have been shown to reduce diabetes complications. For patients with Type 2 Diabetes Mellitus (T2DM) family is an essential provider of support. Family helps in maintaining a structure and organization to provide physical and emotional support for healthy lifestyle adoption.

Aim: The aim of this study was to assess the family support among T2DM patients and its effect on Self Care Practices (SCP).

Methods: A cross-sectional hospital-based study was conducted among 300 known T2DM patients in the age group of 18-60 years attending NCD clinic at Secondary and Tertiary Care Hospitals of Lucknow, selected using systematic random sampling. A pre-designed and pre-tested questionnaire was used for data collection consist of socio-demographic profile and family support. Self-care practice (SCP) was assessed using questions adapted from the "Summary Diabetes Self Care Activities Questionnaire" (SDSCA) by face-to-face interview.

Result: Among 300 patients with a mean age 50±8.9 years, family support was found to be 37.3%. Out of 113 T2DM patients with family support, 72.6 % had good SCP. Out of 98 T2DM patients with helpful family in reminding pills, 76.5 % had good SCP and this was statistically significant.

Conclusion: Family support significantly affect the self care practice in T2DM patients hence during counselling family member should also be included along with patient.

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HELICOBACTER PYLORI INFECTION- A RISK FACTOR FOR TYPE 2 DIABETES MELLITUS

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Background: Diabetes mellitus, generally characterized by increased blood glucose, is an evolving pandemic. Type 2 diabetes mellitus is the most common type. World Health Organization (WHO) states that number of adult deaths from diabetes will be doubled by 2030.
The relationship between H.pylori seropositivity and higher mean Hb A1 c levels has been documented. H. pylori is a gram negative bacterium and one of the most successful human pathogens infecting more than half of the population of the world. This study aims to explore relationship between the two in our region.
Aim: Assess relationship between Helicobacter pylori infection and type 2 diabetes mellitus

Methods: In this case control study, 33 diabetic dyspeptic patients and 43 non diabetic dyspeptic patients were enrolled as per exclusion and inclusion criteria . Whole study was conducted at the Department of Gastroenterology KG medical University. Screening for presence of both type 2 diabetes and H.pylori infection was done.

Result: There were 33 patients with Type 2 diabetes mellitus and 43 without type 2 DM. All of them were dyspeptic. Age of patients ranged from 14 to 65 years. Mean age of patients in diabetic and non-diabetic group was 31.67±9.10 and 35.19±11.13 years respectively. Majority of diabetics 60.6% as well as non-diabetics 74.4% patients were males. Prevalence of H.pylori infection was 24.2% in diabetics and 14% in non-diabetic groups. Statistically, there was no significant difference between two groups for age, sex and prevalence of Helicobacter pylori infection.

Conclusion: This study indicated that Helicobacter pylori infection may be associated with type 2 diabetes mellitus. A further attention based on larger sample size studies for effect of anti H.pylori treatment in dyspepsia on evolution of blood HbA1c levels is needed.

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LIGHT AT NIGHT AND ROTATING NIGHT SHIFT: RISK FOR INSULIN RESISTANCE, TYPE 2 DIABETES AND OTHER METABOLIC DISEASES

B Anjum
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Background: Compromised quality and quantity of sleep, Exposure of Light at night and Rotating night shift may be a novel risk factor for insulin resistance other metabolic diseases due to interference with diet and circadian metabolic rhythm. Long-term elevated cortisol leads to the high blood sugar level and decreased insulin associated with high cholesterol and trigleceride levels due to disturb circadian metabolic rhythm.

Aim: The aim of the present study was to investigate the effect of Light at night and Rotating night shift in Night shift nursing professionals.

Methods: In the present case-control study, we recruited 30 night shift nursing professionals, aged 20-40 years, performed day and night shift duties, were randomly selected from the Trauma Center King George Medical University and 30 age sex matched controls were also recruited in this study.

Result: Data were analysed by unpaired t-test. BMI was higher in cases (23.69+1.96) as compared to controls (21.66+4.04) ($p<0.005$). Insignificant difference ($p>0.05$) found in fasting blood sugar between night workers (78.38 +9.40) and controls (75.14+14.77). Fasting insulin level was significantly increased ($p<0.05$) in night workers (4.05+2.45) than controls (2.75+2.53). Insulin resistance was slightly increased among night workers (0.80+0.50) than controls (0.53+0.51) which was statistically significant ($p<0.05$). Triglycerides was significantly increased in night workers (137.99+51.57) as compared to controls (105.00+67.40) ($p<0.05$). Total cholesterol was slightly higher (210.06 + 44.91) in night workers ($p<0.05$). HDLcholesterol was lower in night workers (40.78 + 10.92) than controls (44.86 + 11.33) but it could not reached at significant
level ($p>0.05$).

Conclusion: Light at night and Night shift work is associated with increased risk of insulin resistance and lipid disturbances (i.e. low HDL-cholesterol and high triglyceride levels) making them more prone for metabolic syndrome and Type 2 diabetes in future.

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LINK BETWEEN SLEEP DURATION,OBESITY AND TYPE 2 DIABETES MELLITUS

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Background: Diabetes Mellitus has been linked to obesity since many years but duration and quality of sleep was never given importance in the field of metabolic disorder.Recently many studies has shown in sleep changes in energy homeostasis,insulin resistance and beta cells functions and many studies have established short sleep Duration as a risk factor for both obesity and Type 2 Diabetes Mellitus.

Aim: To study the link between Sleep duration obesity and Type 2 DM.

Methods: 1.We use appropriate search terms and literature search to identify studies that examine the relationship between sleep Duration obesity and Type 2 DM.

2. We reviewed many cohort and interventional studies establish relationship between obesity and DM.

3.then Meta analysis systemic reviews was done to arrive to a appropriate summary.

Result: Based on cohort included meta analytical data short sleep Duration has been associated with increase risk of obesity.

Association between sleep Duration and Obesity was consistent among all sub groups such as age gender follow up time and BMI.

Evidence from cross sectional studies showed that people with decrease duration of sleep have 2 times higher chances developing Type 2 DM.

Conclusion: Hence Sleep duration being an important Factor for developing Type 2 DM and hence correcting sleep pattern ,can reduce for risk factor for developing Type 2 DM .wheather sleep corrections can prevent obesity or type 2 DM is recently unknown and needs to be examined.

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MAGNESIUM AND ZINC SUPPLEMENTATION IN THE PATIENTS OF ESSENTIAL HYPERTENSION

Dr Suresh Kumar Singh
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Background: Hypertension is a manifestation of alterd lifestyle. In the past , healthy food and adherance to yoga kept majorty of people free from non communicable diseases mainly Hypertension and Diabetes.

Aim: Healthy diet rich in Magnesium and Zinc such as milk and banana etc or supplements diet fron external sources.

Methods: Identify pre hypertensive patients and motivate them to supplement their prescribed treatment with Magnesium and Zinc.

Result: It is seen that systolic and diastolic BP decline by 10 mm Hg if strict healthy diet with above supplements along with healthy lifestyle is adopted at right time.

Conclusion: Lifestyles modification with yoga practice and healthy diet with rich minerals can do miracle even today.This is not limited to hypertension only, it can be better the prognosis of diabetes and other endocrinal disorders.

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PULMONARY HYPERTENSION IN YOUNG PATIENT WITH CLUBBING

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Background: Pulmonary hypertension is defined as an increase in mean pulmonary arterial pressure at or above 25 mmHg at rest. The peak prevalence of Pulmonary Hypertension was noticed between 60 and 69 years Which is 26.5% and prevalence of Pulmonary Hypertension was noticed between 18 to 29 years is 5.8 %
Finger clubbing may be seen in cyanotic congenital heart disease, infective endocarditis and a variety of pulmonary conditions (primary and metastatic lung cancer, bronchectasis, lung abscess, empyema, cystic fibrosis and mesothelioma) .
CASE :22 years old male came with chief complain of Bilateral lowerlimb swelling and breathlessness and palpitation on exertion since 7 days in Out patient department of medicine .
He was diagnosed clinico-radiologically with pulmonary Tuberculosis 12 years back for that he took Anti-Tubercular Treatment for 6 months But he did not get relief then he went to cardiology centre for further management where he took treatment for 1 year , after that he came to our hospital for the same symptoms .

Aim: To study Clubbing with Pulmonary Hypertension
Methods: Case Study
Result: 22 year old male diagnosed with pulmonary hypertension has clubbing in his all fingers of both hand and toes of both legs .
Conclusion: Pulmonary Hypertension with Clubbing in young patient without having any Cardiac cause or Pulmonary pathology.

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RENALASE GENE POLYMORPHISM IN PATIENTS WITH HYPERTENSION WITH AND WITHOUT DIABETES

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Background: Among different etiologies of lifestyle disorders ,role of genetic etiology is unquestionable . Renalase gene polymorphism 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 (rs256178 and rs2296545) of the renalase gene jn patients of hypertension with and without Type 2 diabetes mellitus.

Aim: To study Renalase gene polymorphism in patients with hypertension with and without diabetes
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. Genomic DNA were isolated from collected blood using the phenol-chloroform DNA extraction method. Genotypes for two SNPs (rs2576178 and 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: Mean Age of participants was 51.93 _+10.25 years.There were equal no. 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= 0.010). No significant differences at allele level were observed among groups for rs2576178. However for rs2296545, C>G was significantly higher in Hypertensives with diabetes (C/G =1.86) and Hypertensives with diabetes (C/G=1.86) and Hypertensives (C/G =1.22) as compared to thar in controls (C/G=1.05) (p=0.037)

Conclusion: rs2576178 and rs2296545 polymorphisms were significantly associated with hypertension with and without diabetes.

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STUDY OF CORONARY ARTERY CALCIFICATION AND ENDOTHELIAL FUNCTION IN PATIENTS OF DIABETES WITH SUBCLINICAL HYPOTHYROIDISM

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Background: Diabetes mellitus associated with subclinical hypothyroidism posing as a risk factor for CAD is still controversial. CAC (Coronary Artery Calcification) is an easy and sensitive screening tool for early risk detection for CAD and a definitive surrogate marker for subclinical atherosclerosis. Study was conducted to evaluate the CAC and endothelial function in diabetic patients with subclinical hypothyroidism and to compare it with diabetic patients with euthyroid status.

Aim: To study Coronary Artery Calcification And Endothelial Function in patients of Diabetes Mellitus with Sub-clinical Hypothyroidism in a tertiary care centre in North India.

Methods: A case control study comprising 104 diabetic patients divided into two groups: case group comprising of 52 diabetic patients with subclinical hypothyroidism and control group comprising of 52 diabetic patients with euthyroid status.

Result: Majority of the patients had duration of diabetes < 10 years, which among the cases were < 5 years indicating the unnoticed subclinical range of thyroid dysfunction. Amongst the cases and controls significant differences were observed in TSH (p value<0.001) and CAC showed significant difference between low and high TSH categories (<6 & >8), being high in TSH > 8 category in comparison to TSH < 6 category (p=0.016). The FMD score showed trends of inverse correlation with TSH level but it was not statistically significant, however the FMD is maximally but insignificantly affected by Free T4 (η=0.033, p=0.117).

Conclusion: CAC levels had a positive correlation with serum TSH values and there was trend of inverse correlation between FMD and TSH levels. This indicates the presence of endothelial dysfunction in patients of Type II Diabetes Mellitus with subclinical hypothyroidism as an advent to early atherosclerosis. Also it is recommended that thyroid screening should be done early in the course of patients of Type II Diabetes Mellitus.

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SYMPATHOVAGAL BALANCE IN NEWLY DIAGNOSED DRUG NAIVE COPD SUBJECTS

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Background: The ambiguity of the physiological basis on which Chronic obstructive pulmonary disease (COPD) patients experience autonomic dysfunction is considerable. In order to understand the pathophysiology of COPD, insight into sympathovagal imbalance as a pathological phenomenon in COPD may be relevant and may have potential clinical significance for enhancing risk stratification and the treatment of COPD patients. The present study aimed to measure the sympathovagal balance in newly diagnosed drug naive COPD subjects

Aim: To measure the sympathovagal balance in newly diagnosed drug naive COPD subjects.

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

Result: The demographical parameter showed insignificant differences, however male dominancy 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 standing significantly ($p<0.0001$*) 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, Spearman correlation analysis between LF/HF ratios showed non-significant correlation with HR, deep breath, blood pressure during handgrip, supine, and standing positions

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

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TO EVALUATE THE PRESENCE OF GERD USING FSSG QUESTIONNAIRE WITH ARTIFICIAL INTELLIGENCE

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Background: Questionnaires are extremely important aid to rapidly reach towards diagnosis, assisting in the selection of suitable treatment, and monitoring the therapeutic response without expensive investigations. In this study, we use FSSG questionnaire with AI, which is a major diagnostic instrument for GERD , for Out patients department at HIMS Ataria Sitapur with a gastrointestinal condition, regardless of coexistence of GERD.

Aim: The aim of this study was to evaluate the presence of GERD using FSSG (frequency scale for the symptoms of gastroesophageal reflux disease) Questionnaire with AI on OPD basis in Department of Medicine at HIMS Ataria Sitapur.

Methods: The subjects were 360 consecutive patients on OPD basis visiting Department of Medicine HIMS Ataria Sitapur from June to November 2021 with a GI symptoms including Dyspepsia & Acid Reflux.

They were assigned to fill in the FSSG questionnaire in a Artificial Intelligent machine named Kribado.

Result: FSSG score revealed significant findings in 97.5 seconds.

All 360 completed the study. The subjects demographics were:

male/female ratio of 270/90;

median age of 46 years (range, 20-60 years). 70 subjects with a FSSG score of ≥ 8,

90 subjects have FSSG score of ≥ 16

70 subjects with an FSSG score of ≥ 24 .

130 subjects with an FSSG score of ≥ 32 .

Conclusion: This study revealed that the FSSG questionnaire may be easier for any subject coming to a OPD setup using AI device Kribado for its evaluation of GERD through Upper Gastrointestinal Endoscopy.

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TO STUDY THE IMPACT OF INSULIN RESISTANCE ON HEART RATE VARIABILITY PARAMETERS IN POLYCYSTIC OVARIAN SYNDROME PATIENTS

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Background: PCOS patients shows common features like increased insulin resistance and Adiposity, which have been known to correlate with autonomic dysfunction.
It has been shown to be associated with increased risk of type 2 diabetes mellitus and cardiovascular disease.
HRV should be considered as a technique that characterizes the modulation of Autonomic tone.
Aim: To study the impact of insulin resistance on heart rate variability parameters in Polycystic Ovarian Syndrome patients
Methods: Women of reproductive age (20-40 year) group diagnosed with PCOS according to ROTTERDAM criteria visiting the obstetrics and gynecology department of KGMU, Lucknow were included in PCOS group.
The control group consisted of women with regular menstrual cycles and without clinical and/or biochemical signs of PCOS.
Serum insulin (ELISA), and plasma glucose (GOD POD) were estimated by using fasting sample of blood
HRV study was done by using ad instruments HRV(2.0) , power lab 26T by using lab chart v8.1.10, in autonomic nervous system lab of physiology department of KGMU, Lucknow
Result: PCOS cases had significantly higher body weight, BMI, waist-hip ratio, SBP and DBP.
Normotensive PCOS females had significantly higher rMMSD, HF%, HF (ms2) values while prehypertensive PCOS group had significantly higher LF%, LF/HF ratio.
Conclusion: Insulin Resistance had a definitive impact on heart rate variability, though cardiometabolic factors have their own incidental effect on HRV
On evaluating the effect of insulin resistance on heart rate variability parameters , PCOS females had blunted HRV and altered autonomic function.

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UTILITY OF SERUM URICACID TO HIGH DENSITY LIPOPROTEIN RATIO IN PREDICTION OF GLYCEMIC CONTROL

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Background: India has witnessed diabetes as a growing problem and is on verge of a diabetes mellitus epidemic.Glycemic control is a way to prevent the morbidity associated with diabetes.

Aim: This study aimed to find out the utility of uric acid to high density lipoprotein ratio as a marker of diabetic control

Methods: A hospital based cross-sectional study was conducted among 60 T2DM patient and High density lipoprotein cholesterol, s.uric acid and HBA1C was done after taking their consent to participate in study

Result: Our study demonstrate that uric acid is inversely related to HBA1C and uric acid decreases following elevated HBA1C and their was inverse relationship between HDL and HBA1C and UHR with HBA1C

Conclusion: Established diabetics will have a lowering of uric acid as the diabetic control worsen and UHR could not be used as a marker of diabetic control.

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