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Conclusions: Older patients with CKD are characterized by depressive-hypochondriacal state, high anxiety and depression, which worsens prognosis.

P570 / #1168, E-POSTERS TOPIC: 4. CLINICAL VASCULAR DISEASE / 4.04 CHRONIC KIDNEY DISEASE AND NEPHROPATHIES. KLOTHO AS A BIOMARKER OF SUBCLINICAL CARDIOVASCULAR DISEASE IN CHRONIC KIDNEY DISEASE: A PROOF-OF-CONCEPT STUDY
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Background and Aims: Cardiovascular disease (CVD) is the major cause of mortality among chronic kidney disease (CKD) patients where the reductions in serum Klotho have been related with a better prognosis. However, it is unclear whether circulating Klotho, and its expression in peripheral blood cells (PBCs), are associated with subclinical atherosclerotic cardiovascular disease (sCVD).

Methods: In this proof-of-concept study, we analyzed PBCs gene expression in and serum levels of Klotho and inflammatory cytokines in 103 CKD patients (stages 3–4) without atherosclerotic cardiovascular disease and determined ankle-brachial index (ABI) and carotid intima-media thickness (CIMT). sCVD was defined as ABI < 0.9 and/or CIMT > 0.9 mm. ABI values ≥ 1.3 were excluded.

Results: Patients with sCVD presented lower serum and PBCs expression levels of Klotho (P < 0.001). Correlation analysis showed that both determinations positively correlated with ABI (r = 0.556 and r = 0.373, respectively P < 0.0001) and inversely correlated with CIMT (r = −0.541 and r = −0.445, respectively; P < 0.0001). Multiple regression analysis with ABI and CIMT as dependent variables demonstrated that both Klotho variables, together with serum IL6, were positively and significantly associated with ABI (adjusted R2 = 0.511, P < 0.025), and r2 = 0.445, P < 0.001; and r = −0.437, P < 0.001, respectively). Multivariate logistic regression showed that circulating Klotho, and its expression in PBCs constituted independent protective factors for sCVD (OR [95% CI]: 0.993 (P = 0.002) and 0.231 (P = 0.025), respectively).

Conclusions: Reductions in serum and PBCs expression levels of Klotho in CKD patients are independently associated with the presence of sCVD.

P571 / #1413, E-POSTERS TOPIC: 4. CLINICAL VASCULAR DISEASE / 4.04 CHRONIC KIDNEY DISEASE AND NEPHROPATHIES. BLOOD UREA NITROGEN LEVELS INCREASE AFTER GIVING HIGH-FAT-HIGH-FRUCTOSE AND LOWERED BY ISLAMIC INTERMITTENT Fasting, BUT NOT ONLY RAMADAN Fasting: STUDY IN RATS
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Background and Aims: High-fat-high-fructose (HHHF) intake contributes to developing chronic diseases, including chronic kidney disease (CKD). Fasting in Islam, such as Ramadan fasting (RF), Dawood fasting (DF), and Monday-Thursday fasting (MFT), which is intermittent fasting, have been considered as alternatives to improve health. This study investigates the effect of fasting in Islam on blood urea nitrogen (BUN) changes in HHHF-induced rats.

Methods: A total of 25 Wistar rats were randomly divided into 5 groups. i) NC, standard diet control; ii) HHHF control diet; iii) RF, fasted every day; iv) DF, on the 1st day of fasting (no food and drink), the 2nd day is free to eat and drink, and the 3rd day is fasted again and repeated so on; v) MFT, fasted only on Mondays and Thursdays. The treatment group fasted after 14 days of HHHF induced, with a fasting duration of 14 hours (17:00 to 07:00), for 29 days. BUN measurement is performed after HHHF induction (pre-test) and after fasting treatment (post-test) using the enzymatic photometric method by Photometer Microlab 300. The data was analysed using paired-samples T-test and Wilcoxon.

Results: After fasting treatment, compared to pre-tests, BUN levels did not decrease significantly in the RF group (p = 0.067) but decreased significantly in the DF (p = 0.010) and MFT (p = 0.008) groups. Meanwhile, the NC and HHHF groups did not show any changes in BUN levels.

Conclusions: This result suggests this is a new insight into fasting in Islam, DF and MTF can be an alternative in preventing CKD disease caused by HHHF.

P572 / #15, E-POSTERS TOPIC: 4. CLINICAL VASCULAR DISEASE / 4.05 DIABETES; MACRO- AND MICROANGIOPATHIES. HIGH TG TO HDL RATIO PLAYS A SIGNIFICANT ROLE ON ATHEROSCLEROSIS EXTENSION IN PREDIABETES AND NEWLY DIAGNOSED TYPE 2 DIABETES SUBJECTS
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Background and Aims: We investigated the role of TG to HDL ratio (TG/HDL) on atherosclerosis extension, defined as presence of coronary artery calcium (CAC), carotid and femoral plaque, in prediabetes or newly diagnosed type 2 diabetes (T2D).

Methods: We performed a retrospective, cross-sectional, single centre study involving 440 prediabetes or newly diagnosed controlled T2D subjects. Participants underwent CAC analysis by computed tomography and carotid and femoral plaque evaluation by ultrasonography and were stratified in high TG/HDL (H-TG/HDL) or low TG/HDL (L-TG/HDL) group according to TG/HDL median value. We estimated atherosclerosis extension according to the number of involved vascular districts.

Results: CAC was higher in H-TG/HDL than L-TG/HDL group (29.15 [0.0-95.68] vs 0.0 [0.0-53.97] AU, P < .01); CAC > 0 was more prevalent in H-TG/HDL than L-TG/HDL group (64.5% vs 45%, P < .001). Femoral atherosclerosis was higher in H-TG/HDL group than L-TG/HDL group (57.3% vs 43.6%, P < .01). H-TG/HDL group exhibited a lower prevalence of subjects with 0-TWP compared to L-TG/HDL group (21.8% vs 38.6%, P < .01) and higher percentages of subjects with 2-TWP or 3-TWP than L-TG/HDL group (for 2-TWP 29.5% vs 21.5%, P < .05; for 3-TWP 32.7% vs 20.9%, P < .01). Multiple logistic regression analysis showed that a H-TG/HDL was inversely associated to 0-TWP (P = .05) and positively associated with 2-TWP (P < .05) and 3-TWP (P < .01).

Conclusions: Our data suggest that TG/HDL is a marker of increased atherosclerotic extension in prediabetes and newly diagnosed T2D and may be useful to identify subjects with a higher cardiovascular risk profile.
management as it is more difficult to intubate patients with obesity, and this is especially true in Saudi Arabia and the region of Hail, where morbidity obesity is at 33.6% of the population. Our aim is to establish an epidemiological link for our population between diabetes, obesity and percentage of intubated patients as we measured mortalities and readmissions in 30 days.

Methods: A retrospective cohort study of 751 patients admitted as positive COVID 19 patients, from April 1, 2020 to July 31, 2020, covering a period of 4 months. We then categorised the patient in cohorts accordind to the existence of diabetes mellitus or not, and categorised them according to their BMI index. We then correlated using statistical tool analysis - SPSS statistics tool - intubation, mortality, readmitance in 30 days in thes groups of patients

Results: Around 40% of our cases were diabetic. 18% of the diabetic cases intubated, instead of 7% of non DM cases. Mortalities were higher in the diabetic group as percentage (14% to 7%), and readmissions. Significant correlation between BMI and days of ICU stay.

Conclusions: There is significant morbidity in DM patients with COVID 19, especially morbid obese.

Background and Aims: An estimated experts more than 90% of diabetes mellitus (DM) cases in the wide world correspond to type 2 diabetes (DM). Type 2 diabetes and its associated factors predispose patients to microvascular and macrovascular complications at the brain and increased risk of vascular dementia or development of a stroke. Our aim was to examine brain small vessels histological changes in patients with type 2 diabetes mellitus and diabetic encephalopathy.

Methods: We studied the morphological changes of the brain small vessels in 15 autopsy cases. Pieces of brain tissue were fixed in a solution of IHC Zinc Fixactive (PharMingen, USA), dehydrated, embedded in paraffin, made serial sections 5 μm thick. The microscope slides were stained with Hematoxylin and Eosin, Nissl and Bielschowsky methods, PAS-reaction.

Results: The high density of the capillary network, especially in the cortex of the frontal and temporal areas, segmental spasm and expansion of the perivascular space of Robben-Virchow were detected. The most characteristic early changes in the capillary wall were determined not only by the thickening of the basement membrane with the accumulation of PAS-positive substances, but also its cleavage with the proliferation of endothelial cells. Late manifestations of vessels changes include capillary fibrosis, characterized by the presence in the capillary wall of argenoucholic reticulin and collagen fibers, proliferation of pericytes. One of the important structural reorganizations of the capillary bed were thin-walled microaneurysms - early morphological manifestations of diabetic encephalopathy.

Conclusions: Cerebral microangiopathy at the type 2 diabetes mellitus is a morphological and structural sign of diabetic encephalopathy.

Background and Aims: Macroangiopathy due to diabetes mellitus (DM) causes cerebrovascular diseases, which are major causes of death. Our aim was to study severity of histological changes in intracranial arteries in patients with type 2 diabetes mellitus dead from ischemic stroke.

Methods: We studied the histopathological changes of intracranial arteries in 17 cases of acute ischemic stroke with history of type 2 diabetes mellitus. The histological specimens were collected during necropsy and fixed in a solution of IHC Zinc Fixactive (PharMingen, USA), paraffin embedding, 5 μm thick-section cutting, and stained with Hematoxylin–Eosin, Malory’s trichrome, Nissl and Bielschowsky methods.

Results: Microscopic examination of large arteries at the base of the brain (diameter 200-400 μm) revealed myo-elastofibrosis with splitting of the internal elastic membrane up to 6-7 layers and focal thickening of the intima. In arteries less than 150 μm in diameter, sclerosis and hyalinosis prevailed with thickening of the walls and narrowing of the lumen of the vessels. In the cortical-medullary arteries, segmental lesions were observed in the form of swelling of endothelial cells with increased permeability of the vascular walls and plasmorrhages, fibrinoid necrosis with the formation of milary dissecting aneurysms. On serial sections, it was possible to find paretial and occluding blood clots in the lumen of the arteries. Perivascularly revealed ischemic coagulation and colliquation fresh and old infarctions of various shapes and areas.

Conclusions: At the diabetic cerebral stroke, pronounced changes in the intracerebral arteries in the form of fibrinoid necrosis with an outcome in perivascular fibrosis, hyalinosis, adventitia fibrosis were dominant.

Background and Aims: Type 2 diabetes mellitus (DM) is a significant risk factor for CHD, and experts consider DM to be equivalent to the established risk of CHD. In patients with diabetes, the risk of developing CHD is 2-4 times higher than in patients without diabetes. The aim of our research is the assessment of indices of oxidative modification proteins (OMP) in patients with DM and myocardial infarction (MI).

Methods: All patients were provided with clinical examination, assessment of OMP by Levin’s method with determination of aldehyde dinirophenylhydrazine and ketone dinitrophenylhydrazine neutral character (ADPHn, KDPHn), aldehyde dinitrophenylhydrazine and ketone dinitrophenylhydrazine basic character (ADPHb, KDPHb). Patients were divided into 2 groups: 1 – 32 patients with DM and MI, 2 group – 34 patients with MI and without DM.

Results: We observed a tendency to increase the content of oxidized modified proteins in patients with DM and MI: in this group, the level of ADPHn was 32.15±0.56 U/mg, in group 2-23.51±0.39 U/mg (p<0.001). The level of KDPHn in the 1st group was 22.32±0.45 U/mg, in the 2nd group – 18.23±0.21 U/mg (p<0.001). There was no difference with this ADPHb (p>0.05). There is a correlation between the presence of diabetes and ADPHn (r=0.73, p=0.001), KDPHn (r=0.53, p=0.00002), ADPHb (r=0.38, p=0.0001), KDPHb (r=0.32, p=0.002), between ADPHn and troponin T (r=0.64, p<0.01), troponin T (r=0.52, p=0.002).

Conclusions: The determination of OMP can be both an early and integral test of metabolic disorders and, in the future, hemostasiological disorders in patients with DM and MI.

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