

110- EVALUATION OF SERUM TOTAL CHOLESTEROL AND TRIGLYCERIDE LEVELS IN RURAL AND URBAN DWELLERS

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Cholesterol is essential for the formation of sex hormones, vitamin metabolism, and maintenance of cell membrane integrity, while triglyceride is vital in gluconeogenesis. In this study, the serum level of the two lipids was compared in rural and urban dwellers in Ebonyi State. 123 subjects comprising of 65 rural dwellers (age=26.4+7.1 years), and 58 urban dwellers (age=27.7+5.49 years) participated in this study aimed at evaluating the serum total cholesterol and triglyceride concentration (estimated by routine spectrophotometric technique) in the aforementioned groups. The result showed that there was a significantly higher ($P<0.05$) total cholesterol concentration in rural (4.93+0.97 mmol/l, n=65) than in urban (4.07+1.1 mmol/l, n=58) dwellers. Between the rural and urban dwellers, however, there was no significant change in the level of triglyceride (1.33+0.54 mmol/l and 1.26+0.6 mmol/l respectively). The finding of high cholesterol in rural dwellers suggests increased intake of diets rich in lipids, and apparently a higher risk of vascular disease. Efforts should thus be made by health professionals through relevant government agencies, to enlighten the rural settlers on the inherent risks of consuming lipid-rich foodstuffs.

111- INFERTILITY: A NIGERIAN PERSPECTIVE

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For virtually every couple, infertility brings a sense of loss, failure, and exclusion. Defined as inability to conceive for a period of 12 months of contraceptive-free regular intercourse, or failure to carry pregnancy to term, the chances of being infertile increases with age especially in women. In Nigeria, the prevalence of infertility has been put at between 20%, to distressing levels above 50%, making it not only a public health concern, but also a major threat to marriages. Infertility, which might be primary, secondary, or combined, has arrays of pathogenesis that are anatomical, congenital, hormonal, immunological, microbial,

or iatrogenic in origin. The diagnostic clues are usually a function of the etiology – gonadal steroids estimation, seminal analysis, ultrasonography, and ovarian reserve assessment among others, being the hallmark of proper diagnosis. Management of infertility is a critical step to ameliorate its accompanying psychological stress, itself a cause. Assisted reproductive techniques especially in vitro fertilization has rekindled the hope of very many infertile people mostly in the developed nations but has not gained prominence in this part of the world, hence, the need for a more concerted effort to be made in combating the scourge. While counseling should be advocated to enlighten the couples on the preventable causes of infertility, sponsorship for remedial approaches to the problem should also be stepped-up to assist couples to whom infertility is seemingly inevitable. By these efforts, the alarming burden of infertility in Nigeria will surely be reduced drastically.

112- DIET-INDUCED OBESITY CAUSES HEPATIC OXIDATIVE STRESS: MECHANISMS AND INTERVENTION

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Oxidative stress due to imbalanced free radical generation and metabolism is associated with obesity. Although oxidative stress has been observed in several tissues, its occurrence in the liver during diet induced obesity (DIO) remains controversial. The objective of this study was to investigate the effect of DIO on hepatic oxidative stress and to identify natural compounds capable of protecting against hepatic oxidative injury. Mice were fed either a control (10% kcal fat) or DIO (60% kcal fat) diet for 12 weeks. Compared with control mice, the body weight of DIO mice was significantly increased after the 12 week feeding period. In association with weight gain, DIO mice showed a significant increase in serum malondialdehyde (MDA), a biomarker of lipid peroxidation, as well as a significant reduction in total serum antioxidants. Serum levels of alanine aminotransferase and aspartate aminotransferase, indices of liver injury, were markedly higher in DIO mice. Hepatic MDA levels were also significantly higher in these mice, indicating a disruption in redox balance in the liver. On the other hand, hepatic NADPH oxidase-mediated superoxide anion production was strikingly increased in DIO mice

while the activities of antioxidant enzymes such as superoxide dismutase were impaired. Our results have also indicated that certain natural compounds are hepatoprotective in DIO which may be mediated by their antioxidant effects in the liver.

113- PHOSPHORUS PRELOAD SUPPRESSES SUBSEQUENT ENERGY INTAKE THROUGH SATIATION NOT SATIETY

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Objective: The effect of phosphorus (P) manipulation of a high fructose solution on average appetite (AA) and subsequent energy intake (EI) was investigated.

Method: Four preloads were offered in a blind randomized order to 20 overweight subjects (10 males and 10 females). The preloads were composed of fructose (40g) plus glucose (10g) (200 kcal/250ml) with no added P (HF-0P), 50mg (HF-50P), 250mg (HF-250P) or 500mg (HF-500P) of added P. Subjective AA was measured at 15 min intervals from baseline till 75 min and at 80 min an *ad libitum* lunch (pizza) plus water were offered.

Results : No difference area under the curve (AUC) of AA following the different preloads. The similarity in subsequent water intake indicates a comparable osmolarity. Subsequent EI (expressed in Kcal) decreased with increased P content of the preload. **Conclusion:** Increasing P content of the preload was associated with a reduction in EI at a subsequent meal. The similarity in AA between different preloads indicates that reduced energy intake was mainly attributed to satiation rather than satiety.

114- ARTERIAL RIGIDITY ESTIMATED BY 24-HOURS MONITORING OF THE BLOOD PRESSURE AND ECG IN ELDERLY

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Aim: to compare the vascular rigidity in subjects in age over 60 with normal blood pressure (BP) and in patients with isolated systolic hypertension (ISH) of 1-2 degree.

Methods: The 44 subjects in age of 69,3±5,6 were included in this study. The first group consisted

of 19 patients with ISH, the second - of subjects with normal BP. There were no reliable differences in age and anthropometrics parameters between groups. Hypertension was verified by three BP measurements. Arterial rigidity was estimated by bifunctional ambulatory BP and ECG monitoring using the “BpLab” device (“Petr Telegin”, Russia). Pulse transit time (PTT), arterial rigidity index (ASI), augmentation index (Aix) were determined. The PTT was considered as the time since the opening of aortic valve (from the maximum R-wave on ECG) till the pulse wave’s beginning on the sphygmogram, the averaged through the all cardiac cycles within the one BP measurement. dP/dt reflects the maximum velocity of BP increasing.

Results: In patients with ISH the PTT index was lower reliably (117,3±11,4m/s) than in subjects with normal BP (124,9±5,4m/s) ($p=0,02$). The statistically significant difference of Aix in study groups – 5,2±13,8% and 18,1±17,9% was observed correspondingly ($p<0,001$).

Conclusions: The estimation of indexes of the ambulatory BP and ECG monitoring have shown the reliable difference in compared parameters, that is related not only with increased SBP, but also with structural changes of arteries. The positive Aix in ISH group testifies about the early return of wave reflections, and, correspondingly, about the severity of atherosclerosis.

115- THE ASSESSMENT OF COMPLEX TREATMENT INFLUENCE'S OF METABOLIC SYNDROME WITH HYPERTENSION 1-2 DEGREES ON THE BLOOD PRESSURE AND THE STRUCTURAL AND FUNCTIONAL ARTERIAL PROPERTIES

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Aims: to evaluate the effect of treatment in metabolic syndrome with arterial hypertension 1-2 degrees.

Methods: Overall, 25 consecutive patients with metabolic syndrome: 15 men (60%) and 11 women (40%) aged 52.8 years on average, were studied. The office blood pressure (BP) levels were: systolic BP-153,2+11,2mmHg, diastolic BP-99,5+6,3mmHg, body mass index-33,9+5,2kg/m², waist circumference - 108,9+9,1sm, cholesterol HDL-4,37+0,8mmol/l, cholesterol LDL-2,1+1,3mmol/l. The biochemical parameters were measured on OLYMPUS AU400 device (Japan). Patients were