

(1.8 ± 0.8 , points, $p=0.08$). Obese women also showed a tendency to increase ED of the external type (2.6 ± 0.8 points) compared to groups 1 (2.3 ± 0.6 points, $p=0.075$) and 2 (2.3 ± 0.6 points; $p=0.070$). Restrained food intake was negatively correlated with weight, the ED was more significant in the 1 group (2.3 ± 1.0 points) relative to the 3 group (1.9 ± 0.8 points; $p=0.09$). A noteworthy finding was the higher amount of combined types of ED with higher BMI. Combined types of ED were detected among obese women (50%). The most frequent combinations were emotional-compulsive and external-compulsive types of ED. **Conclusion.** Certain types of ED can be detected independently of BMI levels, but obese women suffer of ED more frequently than women with normal weight and overweight women. ED occur in isolated and combined variants, the number of combined variants increases with rising BMI. Women with normal weight and overweight women demonstrated a more frequent occurrence of restrained type of ED probably due to concern about their outward appearance and higher care for quantity and quality of food intake.

KEYWORDS: eating disorders, body mass index, overweight, obesity.

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SOMETHING NEW ON THE REAL HISTORY OF KETOACIDOSIS

Irina Dzherieva, Maria Komurzhantz, Natalia Volkova

Rostov State Medical University, City Hospital №3, Rostov on Don, Russia

Aim. To estimate the frequency of different risk factors appearance for diabetic ketoacidosis developing in a real clinical practice in Rostov-on-Don. **Material and methods.** Patients with a diagnosis of ketoacidosis were enrolled in the research. A survey to determine the type of nutrition, alcohol intake and other risk factors was conducted. All patients were divided into two groups according to their age. The 1st group — 12 patients younger than 65 y.o. — Nutritional Risk Screening survey, the 2nd group — 3 patients (65–90 y.o.) — Mini Nutritional Assessment survey. «Alcoholic agnosia» survey for the identification of alcohol addiction. **Results.** 15 patients (11 men and 4 women), average age — 36 ± 0.93 y.o. According to type of diabetes: 11 patients of type 1 diabetes mellitus, 4 patients with type 2 diabetes mellitus. Out of 15 patients 10 (66,66%) had nutrition problems. 5 (33,33%) patients were closed to the nutrition risk questions. According to «Alcoholic agnosia» survey: 5 (33,33%) patients had alcohol abuse problems, 3 (60%) of them were aware of this problem, 2 (40%) were indifferent to it. 10 (66,66%) patients did not have alcohol addiction problems. The risk factors of developing ketoacidosis: inadequate insulin therapy — 7 (46,66%) patients, 5 (71,42%) of them with alcohol abuse problems, 2 (13,33%) of

them with a sober life style. Took drugs 2 (13,33%) patients, but also experienced alcohol abuse problems. Exacerbation of concomitant diseases — 6 (40%) patients, 4 (66,66%) of them had alcohol abuse problems. **Conclusion.** The most significant risk factors for developing ketoacidosis were inadequate insulin therapy, exacerbation of concomitant diseases (40%), abuse of alcohol (33,33%), drugs intake (13,33%). 66,66% had nutritional problems but this state is rather the result than the cause of developing ketoacidosis.

KEYWORDS: developing ketoacidosis, risk factors, inadequate insulin therapy, alcohol abuse, concomitant diseases.

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ALPHA-LIPOIC ACID CYTOPROTECTIVE THERAPY IN TYPE 2 DIABETES PATIENTS

Ivan Gorshkov, Anna Volynkina

Voronezh State Medical University, Voronezh, Russia

Objective. To study the alpha-lipoic acid (ALA) efficacy in oxidative stress (OS) modification in type 2 diabetes mellitus (T2DM) patients with diabetic polyneuropathy (DPN). **Material and methods.** 61 patients were included in the research: 29 (48%) female, 32 (52%) male, average age — 50.1 ± 0.5 years, mean T2DM duration — 5.9 ± 0.4 years, DPN — 4.9 ± 0.5 years, AH — 6.7 ± 0.3 years. Neuropathic status (NS) indices: Neuropathy Symptoms Score (NSS), Total Symptoms Score (TSS), Neuropathy Disability Score (NDS), Douleur Neuropathique 4 (DN4); oxidative stress parameters: total oxidative capacity (TOC), total antioxidant capacity (TAC), oxidized LDL antibody level (ab-oxLDL); carbohydrate metabolism state: pre-, post-prandial glycemia, HbA_{1c} were defined in patients. Depending on therapy patients were divided into 2 groups: control ($n=30$) and basic ($n=31$) with 50 ml (600 mg) ALA ready for use solution for 14 days was prescribed; then (600 mg) oral ALA 1 tablet once a day for 12 weeks was prescribed. Statistical analysis was carried out with Excel 2013 («Microsoft») and Statistica 8.0 («StatSoft, Inc.») software, investigated parameters were presented in $M \pm m$, Mann–Whitney test (U) was used for group comparison and significance critical level (p) was accepted at 0.05 or lower. **Results.** ALA therapy in the basic group patients contributed to the reduction of the severity of DPN clinical and laboratory manifestations in comparison to the same parameters in the control group. OS parameters modifications were observed: TOC value decreased by 13.9%, ab-oxLDL — by 12.9%, OSI — by 32.4% whereas TAC increased ones by 27.3% (U, $p<0.05$). In the basic group of hospital patient ALA treatment led to reduced glycemia at 8, 11 and 14 o'clock and HbA_{1c} level in 12.0, 9.1, 11.8 and 8.2% accordingly compared to the same ones in control group patients (U, $p<0.05$). NS indices were reduced significantly: NSS — 16.1%, TSS — 17.6%, NDS

— 12.4%, DN4 — 22.9% (U, $p < 0.05$). **Conclusion.** Alpha-lipoic acid cytoprotective therapy contributes to significant improvements of neuropathic status indices, oxidative stress parameters, and reduces glycemia and HbA_{1c} levels.

KEYWORDS: type 2 diabetes mellitus, alpha-lipoic acid, oxidative stress, glycemia levels, HbA_{1c}.

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A CASE OF CYCLIC ECTOPIC CUSHING'S SYNDROME DUE TO A NEUROENDOCRINE TUMOR OF THE APPENDIX

I. Voronkova, S. Arapova, N. Kusnezov,
A. Abrosimov, E. Marova, L. Rozhinskaya

Endocrinology Research Centre, Moscow, Russia

Cyclic Cushing's syndrome (CS) is a rare disorder, characterized by repeat episodes of cortisol excess interspersed by periods of normal cortisol secretion. The so-called cycles of hypercortisolism can occur regularly or irregularly with intercycle phases ranging in duration from days to years. A 24-year-old woman with fluctuating symptoms of hypercortisolism: weight gain, "moon" face, large purple striae on the trunk and breasts, hair loss on the head, acne, hypokalemia, diabetes. Disease duration was 6 years. Laboratory investigations showed a cyclic ectopic ACTH syndrome. Levels of adrenocorticotrophic hormone fluctuated in the range from 34,0 to 299,0 pg/ml (7,0—66,0), and serum cortisol 457,0—1590,0 nmol/l (123,0—626,0). According to the results of hormonal tests, hypercortisolism cycle length varied from 2 to 11 months, with intervals of normal cortisol secretion from 2 weeks to 3 years.

CT scan revealed a mass in the ileocaecal area (2,5×2,5×4,4 cm). Right hemicolectomy was performed. Histological examination showed a neuroendocrine tumor of the appendix, G2. Our patient remained in clinical remission during a 6-years follow-up.

KEYWORDS: cyclic Cushing's syndrome, appendix, neuroendocrine tumor, ectopic ACTH syndrome.

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BONE MINERAL DENSITY — ONLY BODY MASS MATTERS IN HAVING STRONG BONES?

Klara Tucic-Nemet, Angelina Obradovic, Tatjana Stojisic-Vuksanovic

General Hospital Subotica, Subotica, Serbia

There is a known association of body mass index and bone mineral density, but relative contribution of fat and lean tissue is not so well analysed yet. We aimed to investigate the effect of selected anthropometric parameters including BMI, fat content and lean body mass on BMD in postmenopausal women. Deferred to routine bone MD screening because risk of osteoporosis in menopausal

women or additional risk factors. We could say, our group of 110 women aged 43.4—83.2 years/mean 63.7 y./ is a good representative of the average population of postmenopausal women. **Material and methods.** We included a randomly chosen group of postmenopausal women, deferred to routine bone MD screening because risk of osteoporosis in menopausal women or additional risk factors. We could say, our group of 110 women aged 43.4—83.2 years/mean 63.7 y./ is a good representative of the average population of postmenopausal women in our region of Subotica, northern Serbia. For measuring BMD, Dual energy X-ray absorptiometry was performed, with Lunar type model, which gives simultaneous data of body mass, and content of lean and fat body mass. As first step multivariate ANOVA was used to find correlations between BMI, fat and lean body mass and BMD. Afterwards, Mann Whitney test was used to differentiate groups and localisations correlations. **Results.** The effect of BMI on BMD in L1—L4, femoral neck and hip is statistically highly significant with risk of mistake 0.5, 3.3 and 0.1% consecutively. T score reaches highest values in pre-obese group of patients / BMI 25—29.9 kg/m². The percentage of fat and lean body mass has no significant effect on having osteoporosis or osteopenia in this region. **Conclusion.** BMI and BMD are in tight positive correlation, regardless of the body composition — fat or muscle content. Seemingly, the most important is the mass our bones carry, which is a stimulus for osteoblast activity. We are planning further analyses to investigate eventual additional factors including age, physical activity, comorbidities, medications.

KEYWORDS: bone, postmenopausal, osteoporosis, mineral density.

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THE CASE OF TSH-PRODUCTION PITUITARY ADENOMA WITH LATE DIAGNOSIS

Lidia Garaskova

Primorsky regional centre of diabetes and endocrinological diseases, Vladivostok, Russia

A pituitary adenoma is frequent endocrine pathology. It more common in women. The first place of hormone-activity adenoma belongs to prolactinoma, the second place — somatotropinoma. The TSH-production adenoma is very rare type of hormone- pituitary neoplasias. In the report we will focus on the patient B., she is resident of a remote area of Primorsky Krai. For the first time she was hospitalized in Primorsky regional centre of diabetes and endocrinological diseases in January 2015 with referral diagnosis multinodular toxic goiter. **Of history.** The patient had three cases of hyperthyroidism (in 1983, 1988, 1995). Thyroid resection was carried out three times over the multinodular goiter with symptoms of hyperthyroidism. After the last resection appointed replacement therapy with thyroid medications (levothyrox-