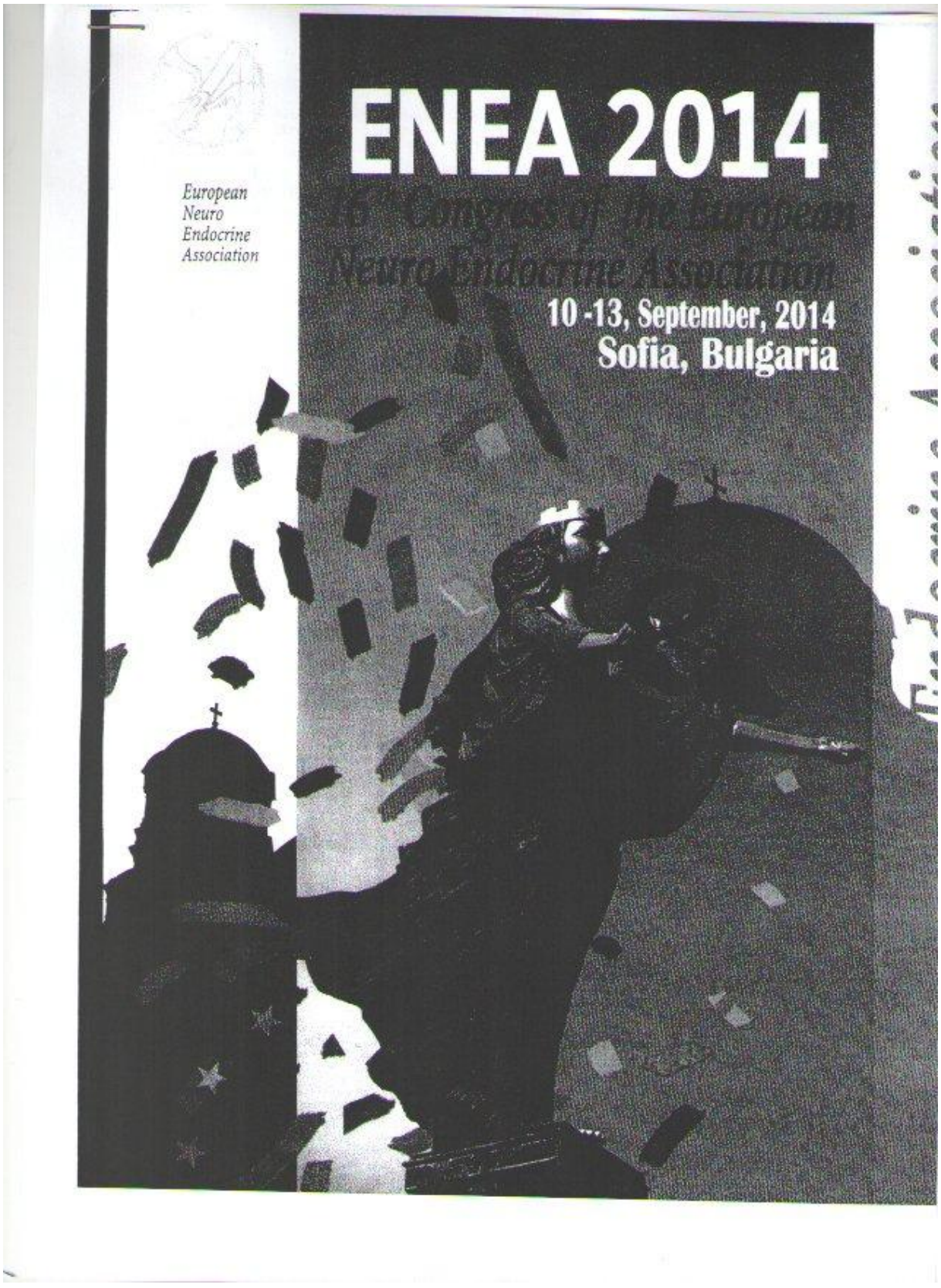
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results in tissue-specific agonism or antagonism and may be a promising target for combating obesity and related disorders.

Abstract-ID: 316

ACROMEGALY TREATMENT AND CARBOHYDRATE METABOLISM DISTURBANCES

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Background: In acromegaly, carbohydrate metabolism disorders (CMD) are frequently observed. We aimed to assess the differences in insulin secretion and sensitivity depending on stage of acromegaly and type of treatment.

Design: 85 patients with acromegaly (59 women; age 55 [interquartile range, IQR 47-60] yrs); 44 were newly-diagnosed (NA group), 22 treated with somatostatin analogues (SSA group) and 19 after transsphenoidal surgery (TSS group). All underwent an OGTT, with measurement of plasma insulin and blood glucose in the fasting state and every 30 minutes for 2 hours after oral administration of 75 g glucose. CMD (impaired glucose tolerance, impaired fasting glucose, diabetes mellitus) were diagnosed according to WHO recommendations. We used the Matsuda index and HOMA-IR to estimate insulin sensitivity.

Results: Mean age (50-54.5 yrs) and mean BMI (29.1-29.9 kg/m2) were comparable between the 3 groups. Z-score IGF1 was similar between the SSA and TSS groups (3.2 [2.3-3.9] vs. and 3.5 [2.7-6.4]), but severely elevated in NA patients (p=0.0001). In the SSA group, prevalence of CMD was 86%, whereas it was 59% in the NA group and 37% in TSS group. NA patients were mainly insulin-resistant, with high fasting plasma insulin (FPI) (91 [51-192] pmol/l, high HOMA-IR (3.6 [1.7-7.8]) and low Matsuda index 7.1(2.7-9.1]. TSS patients had normal FPI (66 [IQR 25-98] pmol/l), and normal HOMA-IR and Matsuda index for their BMI, while SSA patients were mainly insulin-deficient, with FPI 23 (14-63] pmol/l, decline of the first phase of insulin secretion, HOMA-IR 1.3 (0.6-2.9] and Matsuda index 7.1 (2.7-10.1).

Conclusion: Hyperinsulinaemia compensates the high level of insulin resistance in NA patients. In SSA patients, suppression of insulin secretion, particularly its first phase, leads to increasing of percentage of DM patients in this group. After TSS, insulin resistance decreases and insulin secretion is restored, that leads to normalization of carbohydrate metabolism.

Abstract-ID: 408

EFFECT OF THE COMBINED PHARMACOTHERAPY WITH ALPHA- LIPOIC ACID AND BENFOTIAMIN, PYRIDOXINE AND CYANCOBALAMINE ON THE POSTURAL STABILITY OF PATIENTS WITH DIABETIC PERIPHERAL NEUROPATHY

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Background: Diabetic peripheral neuropathy (DPN) is one of the most common complications which occurs in 50-70% of patients with Type 2 diabetes mellitus and . The disease usually affects peripheral nerves and leads to the tingling, pain, loss of sensation in the legs and postural instability. There are researches about the effect of Alpha- Lipoic Acid (ALA) on the reduction of pain and improvement of neuropathic deficits.

Patients and Methods: Sixty patients with good glycaemic control took part in this investigation. The two schemes of treatment were applied: the first- with 600 mg ALA and the second - combined therapy (ALA, benfotiamin, pyridoxine and cyancobalamine together). The postural stability was evaluated using static posturagraphy under two visual conditions (eyes open and eyes closed) on stable and soft surfaces. The investigations were made on the first and 60th day after the drug therapy.

Results: No patient under therapy with deterioration. Improvements of mean sway velocities during stance with closed eyes on two supports for two therapeutic treatments were observed. The best effect was observed for decreasing the amplitudes of postural sways during stance on stable support with open eyes. The patients with combined therapy showed considerably better improvements than patients group treated with ALA only.

Conclusion: Treatment with combined therapy (ALA, benfotiamin, pyridoxine and cyancobalamine together) showed stabilizing effect on the quiet upright stance, that leads to improvement of the quality of life of patients with type 2 DPN.

Keywords: Alpha- Lipoic Acid, Diabetic peripheral neuropathy, Postural sway, Static posturography

Abstract-ID: 469

THE "HUNGER HORMONE" GHRELIN AND ITS MODULATORY EFFECT ON URINARY BLADDER

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Ghrelin is a 28 amino acid hunger-stimulating peptide hormone that is produced mainly by P/D cells lining the fundus of the human stomach and epsilin cells of the pancreas. Ghrelin levels have been found to increase in children with anorexia nervosa and decrease in children who are obese, suggesting that ghrelin is a good marker of nutritional status. It is shown that before eating ghrelin levels go up highly, which signals hunger to the brain. For about three hours after the meal ghrelin levels go down. Ghrelin is unique for its post translational modification of O-n-octanoylation at serine 3 through the enzyme ghrelin O-acyltransferase, which enables ghrelin to activate the ghrelin receptor. The unique ghrelin system may be the most important player compared to the other hindgut hormones participating in the "entero-insular axis". The effects of the peptide ghrelin on various organs and systems are not well established however it is known that it affects the performance of smooth muscle. The aim of the present study was to investigate the influence of ghrelin alone as in combination with angiotensin II (Ang II) on the contractile activity of urinary bladder smooth muscle strips from rat detrusor. The receptors for ghrelin described in the literature are associated with activation of phosphalipase C and increase in intracellular calcium. Therefore, the application of ghrelin on muscle strips of urinary bladder would lead to the occurrence of tonic contractions. We found no statistically significant changes in contractile activity after application of ghrelin alone as compared to the spontaneous activity. The effects of ghrelin were displayed when it was applied in combination with other peptides. For example, 30 min after ghrelin application, the administration of Ang II did not lead to the typical tonic contractions occurring when only Ang II was administrated. The amplitude of the Ang II stimulated contractions was reduced from 1.90 ± 0.20 g to 0.78 ± 0.09 g in the presence of ghrelin ($n = 21$, $P < 0.05$). Based on these results we can assume that the urinary bladder possesses receptors for ghrelin, which are different from those in the digestive tract, with respect to the kind of intracellular signalling mechanism to which they are coupled.

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GINGIVAL STIMULATION: AN IMPORTANT METABOLIC REGULATOR?

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Objective: The aim of this study was to determine if there was a relationship between tooth brushing and the levels of leptin, ghrelin, insulin and glucose, which are important participants of energy homeostasis.

Materials and Methods: The present study included 15 male subjects with