International Journal of Obesity
Volume 19 Supplement 2

The 6th European Congress on Obesity

The Bella Center, Copenhagen, Denmark

May 31 - June 3 1995

Abstract Book

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ANDROID OBESITY AND HORMONAL-METABOLIC DISTURBANCES IN PRE- AND POSTMENOPAUSAL BREAST CANCER (BC) PATIENTS.

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Body weight excess (BWE) behaves differently in relation to the risk of pre- and postmenopausal BC development. We compared the frequency of upper type body constitution (waist/hip ratio » 0.85) and accompanying hormonal-metabolic status in group of patients with early BC. The frequency of W/H » 0.85 was in premenopausal group at level of 32.2% (19 from 59 women, age 44.4 ± 0.7) and in postmenopausal group-49.2% (29 from 59 patients, age 60.0 ± 0.8). Body weight and BWE in both groups with W/H » 0.85 were practically identical. Though differences between these groups in total Chol,HDL-Chol, triglycerides, cortisol, T3 and T4 blood levels and in free cortisol, epinephrine and norepinephrine excretion were not revealed, in postmenopausal patients with android constitution tendency to the increase of basal and reactive glycemia and insulinemia, to more higher concentrations of total lipoproteins and MDA and to more significant depression of mononuclears blood IL-1b and TNF secretion was discovered. Blood E2 levels in both compared groups were somewhat higher than in corresponding groups of BC patients with W/H «0.85. Only in postmenopausal android type patients tendency to more lower LH concentration was revealed. Thus, combination of carbohydrate-lipid, gonadotropin-steroid loop and body composition-modifying cytokines production disturbances may partly explain differences in BWE effect in pre- and postmenopausal age.

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OBESITY,BODY FAT DISTRIBUTION,and SEX HORMONES in MALIGNANT and BENIGN BREAST DISEASES.

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We evaluated associations between obesity,body fat distribution,female sex hormones,and both benign and malignant breast disease Anthropometric measurements were prospectively obtained on 28 patients with breast cancer,32 patients with benign breast disease and 30 control cases.The anthropometric measurements evaluated were biceps,triceps,suprailiac and subscapular skinfold,BMI (Body Mass Index),and WHR (Waist-to-hip ratio) Increasing obesity correlated with a progressive fall in sex hormone-binding globulin (SHBG) level in breast cancer patients There were statistically significant differences between malignant,benign and control BMI and WHR measurements.We concluted that women with upper body fat localization are at increased risk for developing breast cancer.

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BODY FAT DISTRIBUTION IN CUSHING'S AND OBESE

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Body fat distribution was determined by measurement of skinfold thicknesses (SF) and body circumferences (C) in 9 female Cushing's (CS) with BMI(30,3± 5,5 kg/m^2) and 20 female obese patients suspected for CS (O) with BMI (33± 2 kg/m^2). Buffalo "hump" in CS was 41±10,5 mm, significantly higher (p<0,05) compared to O (30,9± 10,6 mm). Supraclavicular, suprascapular and subscapular SF in CS were not significantly different compared to O.Abdominal SF (23,8± 10,5 mm.)in CS, as well as suprapubic (12±9,7 mm) and suprailiac SF (11,4±5,5 mm) were significantly lower than the correspondent SF in O:39,4± 5,5 mm; 32,9± 7,5 mm and 37,3± 5,6 mm. Abdominal to suprapubic SF ratio in CS (1,39±0,03) showed no significant difference than O (1,29±0,35) as well as abdominal to suprailiac SF in CS (2,09±1,55) compared to O (1,04±0,18).Waist C in CS (100,2±15,5 cm)was not significantly different from O(109,4±2,88cm) as well as hip C (104,8±8,8cm) in CS and (114,4±5,8cm)in O. Thigh C was not significantly lower in CS (21,4± 9,45cm) compared to O (31,9±12,8cm).Waist to hip C ratio was 0,96±0,12 in CS,not significantly different from O (0,95±0,05)as well as the waist to thigh C ratio (1,99±0,4) in CS and (1,69±0,14)in O. We found significantly lower SF (abdominal, suprapubic, suprailiac) in CS compared to O, and not significantly different waist C, hip C, waist to hip and waist to thigh C ratio as a result of an increased deep abdominal fat tissue in CS compared to O with more pronounced subcutaneus abdominal fat tissue.

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AVP SYNERGIZES CRF'S CAPACITY TO STIMULATE THE HYPOTHALAMIC-PITUITARY-ADRENAL (HPA) AXIS IN WOMEN WITH DIFFERENT OBESITY PHENOTYPES.

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Background. We have previously demonstrated that, compared to women with subcutaneous obesity (S-Ob) and normal weight controls, those with visceral obesity (V-Ob) have exaggerated ACTH and cortisol response to CRF (hCRF, 100 μg iv), suggesting hyperactivity of the HPA axis, (JCEM, 77:341-6, 1993) (*study I*).While performing a research program to investigate the relationship between the HPA axis activity and the autonomic response to stress, we recently examined the effects of the combined iv administration of CRF (hCRF, 100 μg) and AVP (0.3 I.E.) on hormone levels in two additional S-Ob and V-Ob groups, in order to mimic the hypothalamic peptide flow involved in pituitary stimulation following stressful challenge (*study II*). Age and WHR values in the correspondent groups of each study were not significantly different.

Aim. This study was performed to compare the patterns of ACTH and cortisol response to CRF alone (*study I*) or the CRF/AVP combination (*study II*) in women with S-Ob and V-Ob and in controls (C).

Results. ACTH (early, within 30 min) and cortisol (late, within 60-120 min) responses in V-Ob were significantly higher than in S-Ob and controls in both studies. Comparisons of ACTH (0-30 min AUC) and cortisol (0-60 min AUC) responses after both tests are reported in the table.

Test	*Cortisol (ng/ml/min)*			*ACTH (pg/ml/min)*		
	C	*V-Ob*	*S-Ob*	*C*	*V-Ob*	*S-Ob*
CRF	4357 ±1588	7077 ±5132	2274 d ±2151	3064 ±2231	6415 ±4406	2152 d ±1383
CRF/AVP	3337 ±2503	7016 ±5350	5486 a ±3405	7644 a ±4276	16200 b ±6116	11432 b,c ±6388

Statistics:between tests: a=p<0.05, b=p<0.01. V-Ob vs A-Ob: c=p<0.05, d=p<0.01

Conclusions. The AVP/CRF combination significantly increased ACTH response to CRF alone in all groups but cortisol response was significantly higher only in S-Ob women.