Methods: We measured plasma levels of leptin and its soluble receptor (Ob-Re) in 130 women, including 22 patients with anorexia nervosa, 45 with bulimia nervosa, 18 with binge eating disorder (BED), 12 non-binge eating obese women and 33 non-obese healthy volunteers. Plasma concentrations of leptin and Ob-Re were assayed by ELISA method.

Results: Circulating leptin was significantly reduced in underweight anorexics and normal-weight bulimics, but increased in overweight BED patients and non-binge eating obese subjects. On the contrary, Ob-Re plasma levels were significantly enhanced in anorexics and bulimics, but decreased in BED and non-binge eating obese women. Plasma levels of leptin and Ob-Re exhibited a significant inverse correlation in all groups except in non-binge eating obese subjects.

Conclusions: These results show that opposite modifications occur in circulating levels of leptin and Ob-Re across the eating disorder spectrum. The significance of these findings to the pathophysiology and treatment of EDs remains to be determined.

P14.04

Investigation of neuroactive steroids in anorexia and bulimia nervosa

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Objectives: Anorexia nervosa (AN) and bulimia nervosa (BN) are eating disorders characterized by abnormal eating pattern, enhanced aggressiveness, depressive and anxious symptoms. Neuroactive steroids such as 3a, 5a-tetrahydroprogesterone (3a, 5a-THP), dehydro-epiandrosterone (DHEA), and its sulfated metabolite (DHEA-S), play an important role in the modulation of feeding behaviour, aggressiveness, mood and anxiety. This study measured blood levels of these neuroactive steroids and other hormones in AN and BN.

Methods: 92 women participated in the study; they were 30 AN patients, 32 BN patients, and 30 healthy controls. Blood samples were collected in the morning. Hormones assay was performed by a RIA method.

Results: Both AN and BN patients exhibited increased plasma levels of DHEA, DHEA-S, 3a,5a-THP and cortisol, but reduced concentrations of 17b-estradiol. Plasma testosterone levels were decreased in AN patients but not in BN patients.

Conclusions: These findings demonstrate increased plasma concentrations of neuroactive steroids in patients with AN or BN, and suggest a role for these hormones in the pathophysiology of eating disorders.

P14.05

Leptin production in bulimia nervosa

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Objectives: Plasma leptin has been reported to be decreased in some but not all patients with bulimia nervosa (BN). The aim of this study was to explore differences between bulimcs with low plasma leptin levels and those with normal concentrations of the hormone.

Methods: Plasma levels of leptin, prolactin and 17b-estradiol were measured in 94 women, including 56 drug-free patients with BN and 38 healthy volunteers. Circulating leptin was assayed by ELISA method, plasma prolactin and 17b-estradiol were measured by RIA.

Results: As compared to healthy women, plasma levels of leptin, prolactin and 17b-estradiol were significantly decreased in patients with BN. In this group, circulating leptin was negatively correlated to the duration of the illness and the frequency of bingeing/vomiting. Moreover, 29 bulimcs had significantly lower levels of leptin; the remaining one had plasma leptin concetrations similar to normal controls. The former had a significantly longer duration of the illness and a higher frequency of bingeing/vomiting compared to the latter.

Conclusions: These findings showing a decreased leptin secretion in bulimics with a more chronic disease and a higher frequency of bingeing/vomiting suggest that the chronicity and the severity of BN may affect leptin production.

P14.06

Plasma levels of neurosteroids in the binge eating disorder

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Objectives: In a previous study, we reported increased plasma levels of 3a,5a-tetrahydroprogesterone (3a,5a-THP), dehydroepiandrost-erone (DHEA) and DHEA-sulphate (DHEA-S) in patients with anorexia nervosa and bulimia nervosa. In order to assess whether these changes are related to malnutrition/denutrition, we investigated plasma levels of neuroactive steroids in patients with binge eating disorder (BED), who do not incur malnutrition.

Methods: 68 women participated in the study. They were 9 non-obese patients with BED, 16 obese patients with BED, 12 non-binge eating obese patients and 31 lean healthy controls.

Results: Both obese and non-obese patients with BED exhibited increased plasma levels of DHEA, DHEA-S and 3a,5a-THP as compared to lean and obese healthy controls, respectively.

Conclusions: These findings suggest that alterations in the production of DHEA, DHEA-S and 3a,5a-THP in patients with eating disorders are not due to their malnutrition or denutrition.

P14.07

Neuropsychological and neuroendocrine indices in eating disorders

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An impairment of cognitive functions, including memory, executive control, attention and visuospatial abilities, has been reported in patients with eating disorders (EDs). In this study, cognitive performance and neuroendocrine indices were investigated in 45 drug-free patients with ED (31 bulimics and 14 anorexics) and in 45 healthy controls (HC). The relationships between neuropsychological and neuroendocrine variables also were evaluated.

Neuropsychological indices of executive functions, attention/short-term memory and automatic learning were correlated with plasma levels of cortisol, leptin, dehydroepiandrosterone (DHEA), dehydroepiand-rosterone-sulphate (DHEA-S), 17b-estradiol, and body mass index (BMI). ED patients had a slower and less accurate performance than HC on the non-verbal automatic learning test.

Accuracy and speed on the spatial version of the conditional learning were positively correlated with DHEA-S; the number of learned associations on the same test was positively associated with DHEA. Mean time on SOPT was negatively correlated with DHEA.Our findings suggest that DHEA and DHEA-S, which are increased in ED, play a protective role on executive functions.

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