

**P14. Eating disorders**

**P14.01**

Depression – suicidal ideation – bulimia nervosa

A. Martischnig\*, A. Lechner, B. Steinbrenner, M. Schönauer-Cejpek, M. Steinbauer. *University Hospital of Psychiatry, Graz, Austria*

**Introduction:** Eating disorders are a serious medical and psychiatric problem. They are often associated with depression, suicidal feelings and attempts. There has been little systematic comparison between the groups of eating disorder patients in terms of depressive history, suicidal feelings and suicidal attempts and other comorbid psychiatric illnesses. It has been suggested that eating disorders represent a form of affective disorder (Ranson et al., 1999). Therefore, we are interested in seriousness of the suicidal behaviour in bulimia nervosa and in major depression.

**Methods:** Subjects of this study were 30 female inpatients of the psychiatric hospital, Karl-Franzens-University, Graz, Austria, who met the DSM IV criteria for bulimia nervosa and 30 in-patients with a current major depression episode (diagnosed according to DSM IV). All subjects were interviewed with a standardized structured interview, the Modified Scale for Suicidal Ideation (MSSI; Miller et al., 1986), the Beck Depression Inventory (BDI; Hautzinger, 1993), the Symptom Check List of Derogatis (SCL-90R, Franke, 1995) and the Basic Suicidal Behavior Documentation (Schaller et al., 1987).

**Results:** 55 % of the patients report at least one suicide attempt and 45 % of the attempters report multiple attempts. 75 % of all interviewed females report current suicidal ideation. Women with bulimia nervosa and women with major depression show a similar level of suicidal ideation. The mean MSSI score (SD) for the bulimia nervosa sample is 17,70 (10,27) and for the depressive sample is 20,60 (11,51). There is no statistical significant difference. Therefore all these patients are at higher risk of attempting suicide. The BDI presents a similar result. In addition patients who reported current suicidal ideation have a higher score on the obsessive-compulsive-subscale of SCL-90-R (mean=18,50; SD=9,22) compared to patients without suicidal ideation (mean=13,30; SD=8,54; statistically significant  $p < 0.05$ ).

**Discussion:** The aim of this study is to give an insight into the complexity of suicidal thoughts, depression and obsessive-compulsive symptoms of patients at the psychiatric hospital, Karl-Franzens-University, Graz, Austria. The data of this study suggests that suicidality and depression is equally common in women with bulimia nervosa and women with depressive disorders. Clinicians who treat eating disorders should therefore remain alert to this possibility. Both affective disorders and bulimia nervosa present a risk factor for suicide attempts. Obsessive-compulsive disorder symptoms are common in people who are ill with bulimia nervosa. In addition there is the frequent co-occurrence of obsessive-compulsive symptoms and suicidal ideation. This study supports these facts.

- (1) Ranson, K., Kaye, W. (1999). Obsessive-Compulsive Disorder Symptoms before and after recovery from Bulimia nervosa. *American Journal of Psychiatry*, 156, 1703-1708.

**P14.02**

Eating disorders co-morbidity in heroin addicts in MMT

M. Campana\*, M. Metzger, M. Riglietta, L. Tidone. *Department of Addictive Behaviours – Asl di Bergamo, Italy; ECCAS-Network, Italy*

**Introduction:** in the last few years, psychiatric co-morbidity in substance abuse and dependence was well investigated for anxiety, depression, psychosis etc.

Nevertheless in international studies do not exist detailed epidemiological data about co-morbidity for other addictive behaviours like eating disorders, pathological gambling, sexual addiction and risk seeking behaviours.

**Goals:** to evaluate co-morbidity for eating disorders (ED) in a group of heroin addicted patients (according to DSM IV criteria) in stabilized Methadone maintenance treatment (MMT) (more than 3 months)

**Methods:** we studied all subjects in MMT in a specific week who gave us informed consent. We used EDI (Eating Disorder Inventory) a 64 items test witch defines 8 different scales: drive for thinness (DT), bulimia (B), body dissatisfaction (BD), ineffectiveness (I), perfectionism (P), interpersonal distrust (ID), interoceptive awareness (IA) and maturity fears (MF). EDI was submitted by a trained professional.

**Results:**

|                      |     |
|----------------------|-----|
| MMT group            | 530 |
| MMT group > 3 months | 498 |
| Tested group         | 83  |

|        | DT |      | B  |      | BD |      | I  |      | P  |      | ID |      | IA |      | MF |      |
|--------|----|------|----|------|----|------|----|------|----|------|----|------|----|------|----|------|
|        | n' | %    | n' | %    | n' | %    | n' | %    | n' | %    | n' | %    | n' | %    | n' | %    |
| low    | 71 | 85.6 | 77 | 92.8 | 57 | 68.7 | 74 | 89.2 | 54 | 65   | 58 | 69.9 | 71 | 85.5 | 44 | 53   |
| medium | 8  | 9.6  | 6  | 7.2  | 21 | 25.3 | 8  | 9.6  | 28 | 33.8 | 22 | 26.5 | 12 | 14.5 | 35 | 42.2 |
| high   | 4  | 4.8  | 0  | 0    | 5  | 6    | 1  | 1.2  | 1  | 1.2  | 3  | 3.6  | 0  | 0    | 4  | 4.8  |

**Conclusions:** three scales are specific for ED (DT, B, BD) and these items show a prevalence for eating disorders that seems to be higher than general population. The other five scales are not specific for ED and needed to be compared with other experiences.

EDI is commonly used as a screening test for ED and obviously diagnosis must to be confirmed; our results seem to be very interesting to confirm a very high eating disorders prevalence in this population. We could explain this suggestion in two way: (1) heroin use could hide ED that comes up when the patient is well stabilized with MMT (2) when MMT blocks heroin use, the addictive behaviour changes and drives for another feature.

**P14.03**

Leptin and its soluble receptor across the eating disorder spectrum

V. Martiadis\*, P. Monteleone, V. Iannuzzi, C. Micillo, M. Maj. *Institute of Psychiatry, University of Naples SUN, Italy*

**Objectives:** Leptin is involved in the modulation of feeding behaviour, body weight, energy balance and hormonal secretion by acting through specific transmembrane receptors. Altered leptin production has been reported in eating disorders (EDs), but no information about its receptors has been provided in these conditions.

**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

B. Colurcio, P. Monteleone, G. De Filippis, L. De Luca, M. Maj. *Institute of Psychiatry, University of Naples SUN, Italy*

**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 3 $\alpha$ , 5 $\alpha$ -tetrahydroprogesterone (3 $\alpha$ , 5 $\alpha$ -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, 3 $\alpha$ ,5 $\alpha$ -THP and cortisol, but reduced concentrations of 17 $\beta$ -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

N. Longobardi\*, P. Monteleone, A. Tortorella, M. Fabrazzo, M. Maj. *Institute of Psychiatry, University of Naples SUN, Italy*

**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 bulimics with low plasma leptin levels and those with normal concentrations of the hormone.

**Methods:** Plasma levels of leptin, prolactin and 17 $\beta$ -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 17 $\beta$ -estradiol were measured by RIA.

**Results:** As compared to healthy women, plasma levels of leptin, prolactin and 17 $\beta$ -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 bulimics had significantly lower levels of leptin; the remaining one had plasma leptin concentrations 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

A. Di Lieto\*, P. Monteleone, B. Colurcio, V. Martiadis, M. Maj. *Institute of Psychiatry, University of Naples SUN, Italy*

**Objectives:** In a previous study, we reported increased plasma levels of 3 $\alpha$ ,5 $\alpha$ -tetrahydroprogesterone (3 $\alpha$ ,5 $\alpha$ -THP), dehydroepiandrosterone (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 3 $\alpha$ ,5 $\alpha$ -THP as compared to lean and obese healthy controls, respectively.

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

#### P14.07

Neuropsychological and neuroendocrine indices in eating disorders

P. Bucci\*, G. Amati, D. Sorrentino, A. Mucci, S. Galderisi, M. Maj. *Department of Psychiatry, University of Naples SUN, Italy*

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), dehydroepiandrosterone-sulphate (DHEA-S), 17 $\beta$ -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.