

Methods A total of 806 ED patients (792 females; 379 AN and 427 BN) were recruited. Diagnosis of AN and BN were ascertained according to the DSM-IV-TR criteria by means of the SCID – Patient Edition. AAO was assessed by a clinical interview performed by a psychiatrist matched with a systematic review of medical records. To test AAO subgroups, we used a normal distribution admixture analysis.

Results A bimodal normal distribution of AAO with an early onset and late onset component was found for both AN and BN. Most of the subjects with AN (75.3%) and BN (83.3%) belonged to the early onset group. Both groups had a mean AAO of about 18 years. No significant differences were found concerning the AAO between groups.

Conclusion Consider clinical history and course of AAO for EDs may be crucial for planning treatment. To our knowledge, this is the first study that applied a validated statistical procedure to identify AAO cut-off points for AN and BN.

Disclosure of interest The authors have not supplied their declaration of competing interest.

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EV0451

Interhemispheric functional connectivity in anorexia and bulimia nervosa

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Introduction The functional interplay between brain hemispheres is fundamental for behavioral, cognitive and emotional control. Several pathophysiological aspects of eating disorders (EDs) have been investigated by the use of functional Magnetic Resonance Imaging (fMRI).

Objectives The objective of the study was to investigate functional brain asymmetry of resting-state fMRI correlations in symptomatic patients with anorexia nervosa (AN) and bulimia nervosa (BN).

Aims We aimed at revealing whether brain regions implicated in reward, cognitive control, starvation and emotion regulation show altered inter-hemispheric functional connectivity in patients with AN and BN.

Methods Using resting-state fMRI, voxel-mirrored homotopic connectivity (VMHC) and regional inter-hemispheric spectral coherence (IHSC) analyses in two canonical slow frequency bands (“Slow-5”, “Slow-4”) were studied in 15AN and 13BN patients and 16 healthy controls (HC). Using T1-weighted and diffusion tensor imaging MRI scans, regional VMHC values were correlated with the left-right asymmetry of corresponding homotopic gray matter volumes and with the white matter callosal fractional anisotropy (FA). **Results** Compared to HC, AN patients exhibited reduced VMHC in cerebellum, insula and precuneus, while BN patients showed reduced VMHC in dorso-lateral prefrontal and orbito-frontal cortices. The regional IHSC analysis highlighted that the inter-hemispheric functional connectivity was higher in the ‘Slow-5’ Band in all regions except the insula. No group differences in left-right structural asymmetries and in VMHC vs callosal FA correlations were found.

Conclusions These anomalies indicate that AN and BN, at least in their acute phase, are associated with a loss of inter-hemispheric connectivity in regions implicated in self-referential, cognitive control and reward processing.

Disclosure of interest The authors have not supplied their declaration of competing interest.

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EV0452

Investigation of endocannabinoids and endocannabinoid-related compounds in obese subjects during an hedonic eating experimental test

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Introduction Hedonic eating refers to the consumption of food just for pleasure and not for energetic needs. Endocannabinoids and endocannabinoid-related compounds play an important role in food-related reward and are likely involved in hedonic eating.

Objectives In a previous study we found that in normal weight healthy subjects plasma levels of 2 arachidonoylglycerol (2-AG) decreased progressively after food ingestion in both hedonic and non-hedonic eating condition, but they were significantly higher in hedonic eating. Plasma levels of anandamide (AEA), oleoylethanolamide (OEA) and palmitoylethanolamide (PEA), instead, progressively decreased in both eating conditions without significant differences.

Aims In order to investigate the physiology of endocannabinoids in obesity, we assessed the responses of AEA, 2-AG, OEA and PEA to hedonic and non-hedonic eating in obese individuals.

Methods Fourteen satiated obese patients consumed favorite (hedonic eating) and non-favorite (non-hedonic eating) foods in two experimental sessions. During the tests, blood was collected to measure peripheral levels of AEA, 2-AG, OEA and PEA.

Results Plasma levels of 2-AG progressively decreased in non-hedonic eating whereas they gradually increased after hedonic eating. Plasma levels of AEA decreased progressively in non-hedonic eating, whereas they initially decreased after the exposure to the favorite food and then returned to baseline values after its consumption. The responses of OEA and PEA to favorite and non-favorite food did not show significant differences.

Conclusions These findings demonstrate that, compared to normal weight healthy subjects, obese subjects exhibit different responses of peripheral endocannabinoids to the ingestion of food for pleasure and this could have implications for the onset/maintenance of obesity.

Disclosure of interest The authors have not supplied their declaration of competing interest.

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EV0453

Attachment and hypothalamus-pituitary-adrenal axis functioning in patients with eating disorders

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Introduction Attachment theory suggests that different attachment styles influence the development of individual's self-esteem and modulate the individual's ability to manage stressful events