Joint Symposium

JS0003

Dysregulated metabolic sensing of appetite in anorexia nervosa: implications of LEAP-2 regulation

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doi: 10.1192/j.eurpsy.2024.34

Abstract: Growing interests on the role of metabolic sensors in anorexia nervosa led to implicate metabolic sensing as consequences of anorectic sensing but also in the perpetuation of the disorder. Ghrelin is an orexigenic peptide secreted by the fundic cells of the stomach in situation of fasting and kown to initiate food intake through its activity on hypothalamic and motivation aspect of food intake. A body opf evidenc previously showed that patients suffering from anorexia nervosa display high plasma levels of ghrelin correlated with the nutritionnal status but his orexigenic signal do not seem to modify restrictive behavior. LEAP-2 (Liver Expressed Antimicrobial Peptide 2) is a recently discovered endogenous ghrelmin antagonist, increased during overnutrition and that decreases food intake in humans and animals.
We explored ghanges of ghrelin and LEAP-2 in a longitudinal cohort of 30 patients suffering from anorexia nervosa during a 4 months refeeding program. We show abnormal regulation of LEAP-2 in patients with higher levels in acute stages that decrease with refeeding. This abnormal regulation was associated with early relapse in patients. This abnormal regulation could counteract with the orexigenic signal of ghrelin in patients.
We discuss these results in light with recent evidence on the consequences of LEAP-2 increase of food intake and hedonic feeding relevant in understanding anorexia nervosa.

Disclosure of Interest: None Declared

JS0002

Potential Neurobiological and clinical markers in Extreme Weight Conditions: from Anorexia to Obesity

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doi: 10.1192/j.eurpsy.2024.35

Abstract: Extreme eating and weight conditions (EWC) are a construct that emerges as a dimensional and theoretical model that identifies individuals who exhibit inappropriate eating behaviours and abrupt weight fluctuations. According to this spectrum of EWC, one extreme can be represented by individuals with anorexia nervosa (AN), characterised by excessive food restriction and an extremely low body mass index (BMI), whereas the other end of this continuum is represented by individuals with obesity (OB), characterised by a BMI above 30. In addition to AN and OB, some eating disorders (EDs), namely bulimia nervosa and binge eating disorder, are also part of this continuum, given the high risk of falling into one of the extremes, especially that of higher BMI. Studies have described similar changes at the psychological and neurobiological levels associated with their abnormal eating patterns, delineating vulnerability pathways related to the neurobiological basis.
Based on previous literature, individuals suffering from EWC would show dysfunctional brain activity in regions associated with emotional reward processing and cognitive control compared to healthy controls (HC). Similarly, neuroendocrine alterations in EWC are expected to influence clinical symptomatology. It will also be discussed how impairments in executive function and differential brain activity observed in individuals with EWC may negatively impact their clinical course and treatment outcome.

Disclosure of Interest: F. Fernandez-Aranda: None Declared, S. Jimenez- Murcia Grant / Research support from: We thank CERCA Programme/Generalitat de Catalunya for institutional support. This research was supported by grants from Instituto de Salud Carlos III (ISCIII) (FIS PI20/00132) and co-funded by FEDER funds/European Regional Development Fund (ERDF), a way to build Europe. CIBERObn is an initiative of ISCIII. Additional support was received from the Delegación del Gobierno para el Plan Nacional sobre Drogas (2021I031) and Ministerio de Ciencia e Innovación (grant PID2021-124887OB-I00). Additional funding was received by AGAUR-Generalitat de Catalunya (2021-SGR-00824), European Union's Horizon 2020 research and innovation program under Grant agreement no. 847879 (PRIME/H2020, Prevention and Remediation of Insulin Multimorbidity in Europe) and the European Union's Horizon Europe research and innovation program under grant agreement No 101080219 (eprObes)., Consultant of: FFA and SJM received consultancy and speakers honoraria from Novo Nordisk.

JS0003

(Ir)reversibility of structural and functional brain alterations in severe anorexia

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doi: 10.1192/j.eurpsy.2024.36

Abstract: Anorexia nervosa is characterized by profound structural and functional brain alterations, particularly during the phase of acute underweight. Understanding the reversibility of these changes upon weight normalization is an important question in the pursuit of recovery and relapse prevention. This talk shares findings from recent neuroimaging studies, focussing on the dynamic processes of brain recovery observed during and after inpatient treatment in individuals with severe anorexia nervosa.

Disclosure of Interest: None Declared

https://doi.org/10.1192/j.eurpsy.2024.36 Published online by Cambridge University Press