

**P02-327 - PERSISTENCE AND REVERSIBILITY OF NEUROIMAGING ALTERATIONS IN ANOREXIA NERVOSA PATIENTS AFTER WEIGHT RECOVERY: A REVIEW OF LITERATURE STUDIES**

**V. Meuti**, C. Loriedo, E. Costa

*Psychiatry and Eating Disorder Unit, Sapienza University of Rome, Rome, Italy*

**Introduction:** Anorexia nervosa (AN) is a chronic and relapsing disorder, characterized by aberrant patterns of weight regulation and eating behaviour, body image distortion and resistance to treatment.

**Aims:** This study aims to investigate the reversibility of the most important structural and functional cerebral alteration found in the illness state after weight recovery, in order to distinguish between state-dependent abnormalities and neurological signs of traits vulnerability.

**Methods:** The most significant neuroimaging studies are reviewed from the scientific literature of the last ten years, using the following keywords: "neuroimaging", "anorexia", "reversibility", "weight recovery", "cerebral blood flow", differently matched together.

**Results:** Structural neuroimaging techniques show a widening of internal cerebrospinal fluid filled spaces and a brain gray and white matter volume loss. These alterations take place in the low-stages of AN, as body weight decreases, and generally reverse with weight restoration, as a function of re-feeding.

Functional neuroimaging studies reveal a reduced global and regional cerebral glucose metabolism in the acute state, that reverses with recovery. On the other hands, techniques based on stimuli provocation reveal a greater activation in the medial prefrontal and anterior cingulate cortices in response to food stimuli, that persists after recovery, suggesting that these alterations could be primary abnormalities related to trait vulnerability.

**Conclusions:** Other studies needs to distinguish between primary neural disturbance and secondary phenomena due to starvation, in order to individuate patterns of vulnerability and to develop new strategies of treatment and prevention.