

## P02-148 - STRUCTURAL NEURAL CORRELATES OF ANOREXIA NERVOSA: A REVIEW OF NEUROIMAGING STUDIES

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**Objectives:** Many research groups have used neuroimaging techniques in order to investigate brain abnormalities in patients with Anorexia Nervosa (AN). The results of structural studies, which utilised CT scan and MRI, have revealed both global brain abnormalities and region-specific brain abnormalities. The central disturbance in AN is that of a distorted body image and food refusal. The purpose of the present study was to analyze structural neuroimaging studies in order to reveal the possible existence of a neural basis of AN symptoms.

**Methods:** Published reports from refereed journals of the last twenty years are collected, analyzed and synthesized into a summary of the most significant neuroimaging findings. We used as keywords "anorexia", "neuroimaging", "MRI", "CT", "manual measurement", "voxel based morphometry" differently matched together.

**Results:** Structural studies have showed total decreases in both gray matter (GM) and white matter (WM), with an increase in cerebrospinal fluid (CSF). Several structural follow-up studies reported that GM, WM and CSF abnormalities are fully reversible after recovery, whilst other authors reported that GM decreases persists after recovery. Region-specific structural studies have principally revealed a decrease in extrastriate body area, precuneus, parietal lobe and, following recovery, the anterior cingulate cortex.

**Conclusions:** These results showed a global GM vulnerability in AN patients and that the specific GM regions affected are principally involved in the processing of body-image and mental images, and in the regulation of hunger and satiation. Although these results are still under debate, findings suggest that AN symptoms could have a neural substrate.