

Voxel-based morphometry (VBM) studies in OCD confirm the involvement of the cortico-striato-thalamic circuits in the mediation of OCD symptoms. Based on a recent voxel-based meta analytical study, using signed differential mapping (SDM), some brain morphometry abnormalities in OCD seem to overlap with those in other anxiety disorders, while other neural correlates, such as increased volume of the striatum, seem to be more specific for OCD (Radua et al. 2010 Archives of General Psychiatry). Moreover, specific neural profiles seem to underlie specific symptom dimensions (van den Heuvel et al. 2009 Brain). So far, VBM studies are often limited by relatively small sample sizes, resulting in insufficient statistical power and increased risk of false-positive results.

Although the meta analytical methods, such as SDM, are useful to evaluate the consistency across individual VBM studies, these methods have not the potential to study more subtle brain abnormalities or the study the specific effects of demographic and clinical parameters (such as symptom profiles, medication status, comorbidity, disease onset, etc). In order to reach enough statistical power for such analyses, there is a need for mega-analyses of pooled structural MRI scans. The international initiative 'mega-analysis of OCD and anxiety brain imaging group' (Amsterdam (VUmc/AMC) – London – Barcelona - Sao Paulo – Kyoto – Seoul - Cape Town/Stellenbosch) aims at combining resources and collaborating on such a mega-analysis of structural brain imaging in obsessive-compulsive disorder (OCD). Preliminary results of this mega-analysis will be presented.