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Introduction

Generalized anxiety disorder (**GAD**) is a common mental and behavioral disorder that is characterized by **startle**, exaggerated **sorrows** and **worry**. Patients are aware of their fears being not realistic and sorrows being exaggerated. The exact mechanism of GAD is **not entirely known**. Understanding the pathophysiological basis of GAD is a challenging task and different neuroimaging methods are being tried to solve this problem.

Methods

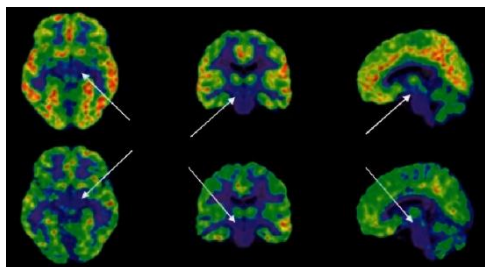
Here, we review the existing literature about neuroimaging methods that have been used to image the function of GAD patients' brain.

Discussion

To conclude, we can say that there is change of function of special brain areas in GAD patients. We propose that future studies will be needed to find the best neuroimaging method to diagnose GAD.

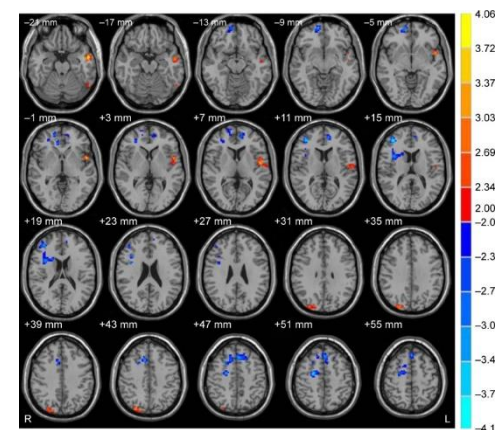
Results

Lee et al. supposed that the striatal dopamine transporter level could have a role in GAD mechanisms. Kalk et al. found increased MFG blood flow. Moon et al. used proton magnetic resonance spectroscopy and found choline/N-acetylaspartate metabolic changes in the dorsolateral prefrontal cortex in GAD patients.



Li J, Ouyang W. Application of PET Imaging in the Brain Regions of the Emotional Control Loop in Patients with Generalized Anxiety Disorder. *J Healthc Eng*. 2021 Jul 22;2021:4505227. doi:10.1155/2021/4505227. PMID: 34336151; PMCID: PMC8321712.

The left striatum of ^{18}F -FDG showed **slow in and slow out**, and the total amount decreased.



Xia L, Li S, Wang T, et al. Spontaneous alterations of regional brain activity in patients with adult generalized anxiety disorder. *Neuropsychiatr Dis Treat*. 2017;13:1957-1965. Published 2017 Jul 20. doi:10.2147/NDT.S133853

Brain regions showing **abnormal ReHo** in **GAD patients** compared to healthy controls. The warm colors represent increased ReHo areas and the cold colors represent decreased ReHo areas.