
Abstract
The amygdala is a key structure in the brain's integration of emotional meaning with perception and experience. Patients with depression have impaired functioning in emotional tasks involving the amygdala, and have abnormal resting amygdala blood flow. To better understand the anatomical basis for these functional changes we measured the volumes of the total amygdala and of the core amygdala nuclei in 20 patients with a history of depression and 20 pair-wise matched controls. Depressed subjects had bilaterally reduced amygdala core nuclei volumes and no significant differences in total amygdala volumes or in whole brain volumes. Since patients with a depression history have bilateral hippocampal volume reduction the volume loss in this closely related structure suggests a shared effect on both structures, potentially glucocorticoid-induced neurotoxicity mediated by the extensive reciprocal glutamatergic connections.